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OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED EXCLUSIVELY TO PROGRESSIVE BEE CULTURE.

Vol. XVIIII. Chicago, Ill., January 3, 1883. No. 1.

THE AMERICAN BEE JOURNAL

PUBLISHED BY

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR,

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The Oldest Bee Association.

In an editorial on the benefits of apiarian exhibits at fairs, in the BEE JOURNAL for Dec. 13, 1882, we remarked as follows :

> The Michigan State Bee-Keepers' Association is the oldest in America, and we are pleased to say that it has been among the first to realize the importance of appointing a committee for the purpose of conferring with the officers of the State Fair relative to giving the bee-keeping interests their due share of attention and prominence at the Fair.

Mr. E. Rood, ex-President of the Michigan State Bee-Keepers' Association, sends us the following criticism for publication :

> MR. NEWMAN: I see, in the last two numbers of the BEE JOURNAL, that Michigan is credited with having organized the first bee convention in the United States. This is a mistake. A convention of considerable numbers of bee-men was held at Cleveland, Ohio, in March, 1860, at which Prof. J. P. Kurtland was President. Mr. L. L. Langstroth and others were present; the first question discussed was on wintering bees. Two subsequent conventions, at least, were held at Cleveland in 1861. The first Michigan convention was held a few years after, and was suggested and gotten up by the late A. F. Moon, as was also the American Bee-Keepers' Convention, of which he was the first President. It was held at Indianapolis, Ind. See Volume 1, pp. 67, 116, 281, 282 of the AMERICAN BEE JOURNAL, 1861. For history and date of first Michigan convention, I respectfully refer you to Prof. A. J. Cook, of Lansing, Mich. E. ROOD.
>
> St. Paul, Minn., Dec. 26, 1882.

Mr. Rood makes the mistake of supposing that we said that the Michigan society was the *first* bee convention. We well knew that it was not the *first bee convention* held in America ; but we reiterate that it is the *oldest* Association. The convention in Cleveland was a transient affair, convening a few times and then *dying* entirely, while the "Michigan State Association" has just held its *seventeenth* regular annual meeting, and is the *oldest* Association; the North-Eastern (New York) comes next, which holds its thirteenth annual meeting at Syracuse next Tuesday, Wednesday and Thursday, Jan. 9-11, 1883. We thank Mr. Rood for the courtesy of calling attention to the matter, but the error is entirely his own—he *meant* one thing, while we said another.

◆

☞ Our thanks are due to those who have renewed their subscriptions for the coming year—and they have so generally done this, that we believe our efforts to publish an acceptable weekly bee paper are appreciated, and our labors are rewarded. Our correspondents as well as advertisers also have our thanks.

◆

☞ The *Indiana Farmer* begins its new volume with a quarto size, which is far more convenient for reference and preservation. It is an able and well-conducted paper for the farm, and has a good bee department.

◆

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but should be written on separate pieces of paper.

Gathering the Statistics.

A committee was appointed by the "North American Bee-Keepers' Society," at its late meeting in Cincinnati, Ohio, for the purpose of securing statistical information relative to bee culture in North America. The members of this committee had a meeting last month, and elected Dr. C. C. Miller, chairman, and authorized him to issue a call for information through all the bee papers of America, and directed him to receive, assort and tabulate them, and then to offer the Tabulated Statistical Table for publication, in all the papers devoted to apiculture in particular, and agriculture in general, as well as to present that table and report to the next meeting of the North American Bee-Keepers' Society, to be held at Toronto, Canada, next fall. In accordance with these instructions, Dr. Miller has issued the following notice, and asked the editors of all the bee papers to publish it, simultaneously, in the first issue of January, 1883:

MR. EDITOR:—At the last meeting of the North American Bee-Keepers' Society, a committee was appointed to obtain statistics relating to bee culture. Upon consultation, the committee have decided to ask, through the various papers devoted to the interests of bee culture, for information directly from the bee-keepers themselves. Will you, therefore, please request each bee-keeper to report his name, postoffice, State, the number of colonies he had in the fall of 1881, the number in spring of 1882, the number in fall of 1882, the number of pounds comb honey taken in 1882, the number of pounds extracted, and the number of pounds of beeswax. Let it be written on a postal card, like the following:

F. Torrens,
East Liberty, Pa.

21 colonies, fall, 1881.
18 colonies, spring, 1882.
25 colonies, fall, 1882.
400 lbs. comb honey.
300 lbs. extracted.
3 lbs. beeswax.

No date is needed; send the postal to Dr. C. C. Miller, Marengo. Ill., and as soon as they can be obtained, the results will be given through the papers making this request.

Let each bee-keeper send in the report of any other bee-keeper who does not send in his own report.

C. C. MILLER,
Chairman Statistical Committee.

We would respectfully request every reader of this notice to sit down *at once* and send a postal card to Dr. Miller, Marengo, Ill., and give the six items he requests, as above. By doing this small share in the work every one will be benefitting him or herself, as well as aiding the cause of bee culture generally throughout the country. Please do not think because you have reported to some bee paper, that such will do in place of this, but stop right here, before reading any further, and

☞ WRITE TO DR. MILLER. ☜

Now, having written the postal card as requested, let us talk the matter of statistics over a little. Here is a letter from Mr. H. L. Jeffrey, Vice President of the N. A. B. K. Society for the State of Connecticut, who wants to have a chat with you upon

THOSE STATISTICS.

I have been deeply interested of late in the articles on obtaining a correct statistical report of bees, honey and beeswax in the United States. I most heartily wish it may be obtained, though I very much doubt that it will be, during 1883.

While reading the letter from Prof. Cook, ex-President of the North American Bee-Keepers' Society, I could not help smiling to think how much help could or would be obtained from the town or State supervisors, as I have had a slight experience in trying to obtain any amount of information from that source. During the census taking, I found just one willing to give any aid out of over thirty that I had conversation with, and he was a bee-keeper. Through him I obtained, as we afterwards found out, just five-sixths of the number of colonies in his town.

In the year 1880, if I remember correctly, you, Mr. Editor, sent me a card asking an effort to obtain, as near as possible, the statistics of Connecticut. Ever since then I have used every available means to obtain it, and I find that it is next to an impossibility to find out very much.

In the first place, the number of colonies in the spring should be stated.

2. The increase, the amount of surplus honey, and the amount of beeswax, etc.

3. The number of colonies to be put into winter quarters, saying nothing of the hive used, the method of wintering, etc.

Now comes the trouble. There are so many box-hive men to be looked up, whose separate productions for the market supply may be compared with one mill to a dollar, though it should be known to make the whole complete, and their wax product is proportionately greater than that of the practical apiarist.

In order to obtain the information in my last annual report to the North American Bee-Keepers' Association, I have worked for three years, and I honestly do not believe it is anywhere near correct, though I worked faithfully for it, and used every means in my power, and my memoranda shows it cost nearly $100, to say nothing of the time spent in writing or visiting bee-keepers, or the amount used for postage on letters or cards I received from parties furnishing me with information.

Scarcely any one ever thinks of the magnitude of such an undertaking, except those having tried it, and, worse than all, is the amount of fault-finding there is to withstand from those thinking they could have done better, though, in reality, the hardest amount of work they do is with their tongue.

Mr. J. S. Terrill's plan is quite worthy of a trial if the vice-presidents have either ambition or curiosity enough about them to push it through; and there is another trouble, if they have too much push they will not get any information, because it takes time and some trouble to make out even a small report. The greatest trouble is to try to get a report within a stated time, because no man will do anything till he gets ready, and the more you drive the more he holds back; nevertheless, it can be worked at, year after year, until a nearly correct statistical table will be the result.

Let the Committee on Statistics appoint a man in each State, giving him a specimen blank; furnish him a list of all the bee-keepers, and allow him three months in which to do his best, then call for a report; then call for another final report, in time for the National Convention. I know that a fair result can be obtained by that plan. Nearly every State has either an agricultural paper or a principal paper of some sort, and its columns can be used by some one to a very satisfactory result. Write a few articles for it, then make a call through its columns, and he will hear from more than he thinks; then, two or three more articles, another call and another response; each time he will obtain a wider field. I have tried this plan and I find it is better than anything except a regular, thorough canvass. Try not only the papers, but solicit aid of all the farmers' clubs and the agricultural societies. H. L. JEFFREY.

Woodbury, Conn., Dec. 23, 1882.

The reader will please notice the fact that Mr. Jeffrey has worked for three years and spent nearly $100 in money, in his endeavor to get the correct statistics of his State on bees and honey. Now, shall we ask another favor of you? Of every bee-keeper you can obtain an interview with, no matter whether he has 5 or 500 colonies of bees, just make a memorandum of his name, post office and State (so that it may be classified), and then send to Dr. Miller a postal card containing the reports, from your memorandum book, of the season's work of every one who has not himself already reported. This is but a trifling matter, but will tell wonderfully on the general result. Instead of costing you $100, as it has Mr. Jeffrey, it will cost you but a few cents, and you will be fully rewarded in the general results which will certainly follow the attainment of correct figures concerning the honey crop of America.

Prof. Cook very aptly remarks that "the magnitude of the business once known, it will be better appreciated as one of the important industries of the country." But few can fail to recognize the importance of full and accurate statistics of the present condition of Apiculture in the United States, both as to the number of colonies of bees and the honey product, and we hope, as a result of this endeavor, to obtain them. If we fail, the failure will be justly charged to the bee-keepers themselves throughout the country.

The International Fair at Hamburg.

From Washington we have the following in reference to the General Stock Fair at Hamburg, Germany. We should very much regret it, if the American bee-keeping interests are not fully and creditably represented. A dispatch from Washington, a few days ago, published in the daily papers, is as follows:

The assistant secretary of state is just in receipt from the United States consulate at Hamburg of full information in regard to an international exhibition of domestic animals, fish, etc., to be held at Hamburg in July, 1883.

The committee of this exhibition are exceedingly desirous of calling the attention of the people of the United States to this matter, and solicit their participation in the exhibition. The committee having charge of the exhibition is composed of the leading and most distinguished citizens of Hamburg, together with representative men from other countries. The special programme will have many novel features. The exhibition will begin on July 3, 1883, and will be closed on July 11.

The following departments will be fully represented: Horses and mules, cattle, sheep, swine, bees, with appliances for their keep and culture, with their products; fish and poultry, stalls and other places for the keeping of animals, as well as machinery and implements directly connected with the breeding, keeping, or culture of domesticated animals, and lastly, scientific researches and results, with the literature relative to the breeding of animals. For each of these sections there will be a special committee acting under the order of the general committee and the board of general directors.

All applications for space or place must be received by Jan. 30, 1883. As no duties exist in the district of the free city of Hamburg there are no custom-house complications. The prizes to be awarded in the several sections will consist of cash prizes, medals, certificates of merit and various honorary prizes. Cash prizes may be exchanged for articles of silver of an equivalent value. The committee is composed of the following persons: Albertus von Ohlendorf, president; Syndic Dr. Leo, vice president; Consul General Emile Notting, treasurer, and Richard Seeleman, secretary. The committee have made arrangements with the Hamburg-American Packet company for special reduced rates for the transportation of animals, etc., from New York to Hamburg, and also for their return to New York. C. B. Richard & Co. are the agents at New York.

Bee-Keeping in the South.

The following is a very reasonable article, which we notice in *The South*, and will be read with interest by those who contemplate removing their bees to some southern climate, during the present winter or coming spring:

It is claimed that honey is one of the most healthful sweets that can be found. As the honey bees feed on the pure juices of healthy plants, it is clear that the honey must partake of the quality of the blossoms from which it is extracted. The sugar in honey is of a highly nutritive character. It is a sweet of rare purity, and it has been regarded with peculiar favor from the remotest antiquity.

That the South is highly adapted to bee-keeping is evident from the natural condition of the country. The climate is promotive of rare exuberance of vegetation and of a *flora* varied, rich, and abundant. In the South the bees finds not only this abundance from which to gather delicious sweets, but there are many plants, shrubs, and trees, such as basswood, poplar, persimmon, holly, black gum, blackberry, wild cherry, etc. In addition to these there are numerous honey-producing perennials.

Again, the season of labor is much longer than at the North. Neither does the bee suffer from the severity of the weather to the same extent as at the North. The economic aspects of the subject are largely in favor of the South as a place for the successful pursuit of the business.

In all sections of the South bee-keeping obtains. A Florida bee-keeper states that he started the season of 1881 with 35 colonies, which increased during the year to 86. During the same season he took from them 6,500 lbs. of honey. He attributes his success more to the natural advantages of the country than to any skill on his own part.

To insure success, bee-keeping requires intelligent attention and aptitude for the business. Those who undertake it without applying the proper means are likely to fail in this pursuit as in others. Theoretical knowledge is valuable, but practice is essential to a true comprehension and to the best results. The bee is endowed with wonderful instincts, the study of which is replete with interest. While reaping large profits from the pursuit, the bee-keeper may, at the same time, acquire a store of knowledge of the mysteries of nature.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., January 1, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The supply of extracted honey is fully up to the demand. My quotations are: 7c. for dark and 9c. for light, delivered here.

BEESWAX—It is quite scarce. I am paying 27c. for good yellow wax, on arrival; dark and off colors, 17@22c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The demand is good for extracted in barrels as well as in glass jars and tin buckets; arrivals are fair. The demand is fair for comb honey, which, however, is not cheap enough to make trade lively. Extracted brings 7@10c. on arrival; comb honey, 14@20c.

BEESWAX—Is scarce and brings 20@27c. on arrival.

CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand for comb honey does not keep pace with the receipts. There is a large surplus on this market at present, and prices are from 2 to 3c. lower than last month.

We quote: white comb honey, in 1@2 lb. sections, 17@18c. Dark comb honey, hardly any demand. It is held at 12½@15c. Extracted—White brings from 9@10c.; dark, 8@9c.; kegs, half-barrels and casks bring about same price.

BEESWAX—Choice Yellow, 30c.; dark to medium, 18@25c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—No business worthy of note is reported. Offerings of dark honey, either comb or extracted, are neglected.

White comb, 17@20c; dark to good, 11@13½c; extracted, choice to extra white, 8½@9½c.; dark and candied, 7@8c.

BEESWAX—We quote 25@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Dull. Comb, at 16c. for large or hard to 19@20c. for choice bright in small packages; extracted at 8@9c.; strained, 6½@7c.; choice, in smaller quantities, brings more.

BEESWAX—Prime bright steady at 27@28c.

W. T. ANDERSON & CO., 117 N. Main Street.

CLEVELAND.

HONEY—Has changed in price a very little, we find it necessary to sell all grades about 1 cent per ℔. less. Best white, in 1 ℔ sections, 20@21c. per per pound; in 2 lb. sections, 18@20c. Extracted is very dull indeed, hardly any sale.

BEESWAX—Scarce, 28@30c.

A. C. KENDEL, 115 Ontario Street.

NEW YORK.

HONEY—There is only a moderate supply of choice to fancy white clover honey, and prices are still held firmly, though the demand is not large. Buckwheat and extracted honey continue slow.

We quote: White clover, first quality, 1 ℔ boxes, 25c; 2 lb. boxes, 23@25c.; buckwheat, 1 ℔ boxes, 20c.; 2 lb. boxes, 16c. Extracted, white, 12@13c.; dark, 9@10c.

BEESWAX—The supply has been light and prime lots held a shade higher.

Western pure, 30@31c; southern, pure, 31@32c.

D. W. QUINBY, 105 Park Place.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—30c.

CROCKER & BLAKE, 57 Chatham Street.

☞ May we ask you, dear reader, to speak a good word for the BEE JOURNAL to neighbors who keep bees, and send on *at least one new* subscription with your own? Our premium, "Bees and Honey," in cloth, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

Local Convention Directory.

1883. *Time and Place of Meeting.*

Jan. 2-4.—Eastern N. Y., at Albany, N. Y.
E. Quakenbush, Sec., Barnerville, N. Y.
9.—Cortland Union, at Cortland, N. Y.
M. C. Bean, Sec., McGrawville, N. Y.
9.—Ohio State, at Columbus, Ohio.
D. Spear, Sec., Cardington, Ohio.
9-11, Northeastern, at Syracuse, N. Y.
G. W. House, Fayetteville, N. Y.
10, 11.—Indiana State, at Indianapolis.
Dr. J. H. O'Rear, Pres.
11, Nebraska State, at Wahoo, Neb.
Geo. M. Hawley, Sec.
16,—N. W. Ill. and S. W. Wis. at Freeport.
J. Stewart, Sec.
18, Champlain Valley, at Middleburg, Vt.
T. Brookins, Sec.
19, 20.—Mahoning Valley, at Berlin Centre, O.
L. Carson, Pres.
20.—S. W. Mich., at Ann Arbor,
G. J. Pease, Sec., Ann Arbor.
Feb. 3.—Northern Ohio, at Norwalk, O.
8.—Maine State, at Dexter.
Wm. Hoyt, Sec.
14, 15.—N. E. Ohio and N. W. Pa., at Andover
C. T. Leonard, Sec.
April 5.—Utah, at Salt Lake City.
E. Stevenson, Sec.
17, 18,—Texas State, at McKinney.
Wm. R, Howard, Sec.
May 11.—Iowa Central, at Winterset.
J. E. Pryor, Sec.
—, —Texas State Convention, at McKinney.
Dr. W. R. Howard, Sec.
Oct. 17, 18.—Northwestern, at Chicago, Ill.
Thomas G. Newman, Sec.
9, 10.—Northern Migh. at Sheridan, Mich.
O. R. Goodno, Sec., Carson City, Mich.
Dec. 5-6, Michigan State, at Flint.
H. D. Cutting, Sec., Union, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

Convention Notices.

☞ The Northeastern Ohio and Northwestern Pennsylvania Bee-Keepers' Association will meet at Andover, Ohio, to hold their annual convention, on the second Wednesday and Thursday of February, 1883.
C. T. Leonard, *Sec.*

☞ The annual meeting of the Cortland Union Bee-keepers' Association will be held in Cortland, N. Y., on Tuesday, Jan. 9, 1883.
M. C. Bean, *Sec.*
McGrawville, N. Y.

☞ The annual meeting of the Champlain Valley Bee-Keepers' Association will be held at Middleburg, Vt., on Thursday, January 18, 1883, at 10 a. m. T. Brookins, *Sec.*

☞ The Northeastern Bee-Keepers' Association will hold their thirteenth Annual Convention in the City Hall, at Syracuse, N. Y., on the 9th, 10th and 11th days of January, 1883.

Business of great value to every bee-keeper in the State will be brought before the meeting. Every member is requested to attend and bring their friends, that all may be benefited by the action there taken.

The question drawer will be opened each day, and questions answered and discussed. All are invited to send questions. Appropriate diplomas will be awarded to successful exhibitors of implements, etc. Let all attend.
Geo. W. House, *Sec.*

☞ The Texas State Bee-Keepers' Association will hold its Fifth Annual Convention at McKinney, Collin Co., on Tuesday and Wednesday, April 17th and 18th, 1883; at the residence of Hon. W. H. Andrews.

The following committees have been appointed, and the programme arranged for the next meeting, by the executive committee; viz: on Resolutions; Apiarian Supplies and Exhibits; Subjects for Discussion; and Arrangements, to receive and entertain those in attendance from abroad.

Programme.—President's Address. Subject—State and National Conventions.

Subjects for general discussion:

Essays.—The "Coming bee," W. H. Andrews. Honey plants, Native Horsemints, different varieties, Wm. R. Howard. "Extracted vs. Comb Honey," W. K. Marshall, D. D. "Bee-Moth," W. H. Andrews. "The Queen Bee, her nature and habits, Wm. R. Howard. "The different races of bees in America; their relative value to apiculture," W. K. Marshall, D. D.

Other essays are promised, and a general good time is anticipated. Ample arrangements are made to accomodate those from a distance. Those wishing to place anything on exhibition or correspond with the committee of arrangements, will be promptly attended to, by addressing, W. H. Andrews, President, McKinney, Collin Co., Texas. All other correspondence to the Secretary. We would be pleased to have any one propound questions of interest for discussion, as we have found great interest, as well as valuable information gained by the discusssion of questions contributed to our "Question Box."
Wm. R. Howard, *Sec.*
Kingston, Texas.

☞ The annual meeting of the Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association will be held in Temperance Hall, Freeport, Stephenson county, Ill., on January 16 and 17, 1883.
Jonathan Stewart, *Sec.*
Rock City, Ill.

☞ The Eastern New York Bee-Keepers' Union will hold their 11th Semi-Annual Convention on Tuesday, Wednesday and Thursday, January 2nd, 3d, and 4th, 1883, at the State Agricultural Rooms, State Street, Albany, at 10 o'clock, a. m. All interested in bees are invited to attend.
C. Quackenbush, *Sec.*
W. L. Tennant, *Pres.*

☞ The Nebraska State Bee-Keepers' Association, will hold its annual session in Wahoo, Saunders county, Neb., commencing Thursday, Jan. 11th, 1883. Arrangements have been made with the railroads to secure 1¼ fare for the round trip. The Saunders county Bee-Keepers' Association will furnish entertainment free to all visiting apiarists. Bee-keepers from neighboring States will be welcomed.
T. L. VonDorn, *Pres.*
Geo. M. Hawley, *Sec.*

☞ The Southeastern Michigan Bee-Keepers' Association will hold their annual meeting in the court-house at Ann Arbor, Jan. 20, 1883. All are invited. H. D. Cutting, *Pres.*
G. J. Pease, *Sec.*, Ann Arbor.

☞ The Ohio State Bee-Keepers' Association will meet in Columbus, in the rooms of the *Ohio State Journal*, on Tuesday and Wednesday, Jan. 9 and 10, 1883. A full attendance of members, and all interested in bee-culture, is requested, as matters of interest and importance will be discussed.
Dr. H. Besse, Delaware, O., *Pres.*
Daniel Spear, Cardington, O., *Sec.*

☞ The annual meeting of the Mahoning Valley Bee-keepers' Association will be held at Berlin Center, Mahoning Co., O., in the town hall on Friday and Saturday the 19th and 20th of January, 1883. All bee-keepers are invited to attend and send essays, papers, implements, or any thing of interest to the fraternity. A full attendance is requested of all who are interested. In fact, the meetings will be so interesting that you cannot afford to miss them. We expect a lecturer from abroad on the evening of the 19th. L. Carson, *Pres.*

☞ The Indiana State Bee-Keepers-Association will hold its annual meet' ing at Indianapolis, Ind., on Jan. 10 and 11, 1883. All are invited.
Dr. J. H. O'Rear, *Pres.*

☞ The quarterly meeting of the Marshall County Bee-Keepers' Association will meet in Marshalltown, Iowa, on Saturday, Jan. 6, 1883, at the Sheriff's office, in the Court House, at 10:30 a. m. The subject for discussion being "Winter and Spring Care."
J. W. Sanders, *Sec.*

Subscription Credits.—After sending subscriptions to this office, we would respectfully ask every one to look at the label on the wrapper of the next two papers, and there they will find the credit indicated thus: Those who have paid for the first six months of next year will find "June 83" after their names. Those who have paid for the whole year will find "Dec. 83" on their papers. The credit runs to the *end* of the month indicated. If the mark is "Dec. 82," it means that the subscription is paid until the end of the present year. Please remember that the credit given on this label is a sufficient notification of subscriptions due and receipt for payments made. If not so indicated within two weeks after sending money to us, you may be sure something is wrong, and should write to us about it. It will save annoyance and trouble if our subrcribers will give this matter due attention.

CORRESPONDENCE.

For the American Bee Journal.

One-Half Pound Sections for Honey.

JAMES HEDDON.

For sometime Boston honey dealers have been quoting half-pound sections of honey at prices about 5 cents per pound higher than those quoted for the one-pound package. These figures have set hundreds of producers to thinking about another change, wishing, as all progressive men do, to "keep abreast of the times," and reap the profits that always accrue by so doing. They also do not forget that *changes* cost money, patience and time, and they dislike to step out from the beaten path, without some sort of certainty that they are moving in the right direction. At our late Michigan State convention this subject was taken up and discussed at considerable length. I was reported as saying that I was intending to adopt the half-pound size. This was a mistake. What I said was that my neighbor bee-keeper (Mr. W. H. Shirley), to whom I sold my Glenwood apiary, finds 2-lb sections too large, and thinks of jumping the whole distance at one leap, and going, not to the one-pound, but to the half-pound sections; and that we had been holding private conventions of two, over the matter for some considerable time.

Since the report appeared I have received several communications regarding my opinion about the matter. It has been said that "a man will give his opinion when he will not give a cent in money;" that "advice is cheap," etc., etc.; but the truth is, these friendly letters of inquiry from brother bee-keepers are getting too many, not for my inclination, but for my ability to answer, so I will try to satisfactorily reply to all in this article.

My opinion is, that it is of great importance that we should all use an *uniform* section, if any, of this size; that it will pay to have some of this size on our markets; that we should try to get to the best size and shape, as soon and with as little expense as possible. Just here let me make some statements that, I think, are settled facts.

1st. Thin comb foundation, if good, is used at a profit, even at $1.00 per pound.

2d. The thinner a card of honey is, the more surface and look of "quantity" it presents, in proportion to its weight or real amount.

3d. The thinner the comb is to be built the straighter it will be, all other influences being equal.

4th. The thinner it is the sooner the honey will be ripened, fit to seal, and the sooner sections will be *finished*, ready to come off.

These thin combs would, without the use of comb foundation, cost more in proportion to their capacity than thicker ones; but, with its use, probably less. But, again, nothing but perfectly-made foundation will be fit for combs as thin as would weigh only one-half pound, yet made in 4¼x4¼ sections. I have some other reasons to make me fear to cut the combs down to this thinness, as was mentioned at our State convention.

5th. If the weight be reduced one-half by *thinning* the 4¼x4¼ sections alone, they will be extremely thin, and we who use the case method will have no alterations to make, and only to order sections 9 or 10, instead of 7 to the foot

6th. If the same reduction is made by cutting down the size of the square of the section alone, and this being done only horizontally, leaving the thickness (2 inches) the same, thus adapting the new standard one-half pound section to the present broad frames in use, fitting the present form of the tin separators, as they would, making a section 4¼ inches high by 2 thick, and say 2 wide, then this size would necessitate no changes to those who use broad frames, and while they would loose the above-named advantages of thinner combs, they would gain one, viz.: that this smaller square section would ship more safely.

Thin combs will do away with any need of separators by even the least adept and experienced, I think, and also give us richer honey. Cutting down the perpendicular width will make our space greater up and down, than horizontally, and bees prefer this shape and in it fasten their combs more securely to the section, as I found out when I used the two sizes, 4½x6⅜ inches on its side, and 5x6 on its end.

Now, remembering that there is often "danger in extremes," I am of the opinion that a reduction in both the directions named, will be best, and that experiments will bring us to a section (without separators) about 1½ inches thick by 4¼ high x 2¼ inches wide, standing on end. These will not fit any of the frames or cases now most in use, without remodeling, but the truth of their appropriate shape will still remain the same.

In adopting this new standard small section we cannot afford to have more than *one* size, and we cannot afford to sacrifice the best shape the least particle, to accommodate any fixtures that any or all of us may have now on hand. I know that actual experiment, on no small scale, and by many apiarists of good judgment and no prejudices, is the best method by which to solve almost any problem in a branch of science, but theory may bring us pretty close to the true standard if we reason carefully from facts already well proven by our past experience.

We who use the new case method will have to knock our cases apart and add three more division spaces, properly spacing all, and nail together as before.

Those who use broad frames, if they still preserve that system of surplus storing (I would abandon it, I assure you, if I did), will have to cut down the width of their frames merely. 7 frames, 2 7-16 inches scant, will just fill the place of 4 frames, 4¼. Such a frame, viz.: 4¼x2 7-16x1½, used without separators, will, I think, come as near one-half pound gross as we can get it.

I deem it a great advantage, as regards the passage of the bees, straightness of the combs, convenience of the bee-keeper in examining the cases (enabling one to see the condition of the combs better), as well as driving down the bees when removing the same, and handling the sections in and out of the cases and shipping crates, that the narrow piece be not less than ⅜ narrower than the wide piece, and that this narrowness extend entirely throughout the length of both top and bottom piece of the section. We want no corners or closed tops, and all the above holds good for any section of any size.

It seems that no size of section, whether filled in company with separators or not, can be relied upon regarding any particular weight; that is, close enough to make the sale-without-weight system an honest one. So let us expect our half-pound sections to be sold by weight, and not by the piece. With separators to hold the same amount of honey, the sections should be ¼ inch wider. These "separatored" sections of honey have, like "yon fellow, Cassio," "a lean and hungry look," a look of much "tare," that combs born without their interference do not have.

WHO SHOULD ADOPT HALF-POUND SECTIONS FIRST?

My idea is like that of Dr. C. C. Miller's, expressed by him at our convention, that all the sizes will be more or less in demand, and he said if he knew every one but he were going to use the pound and half-pound sections he would use the two-pound, as some larger ones would be in demand. Now this is a true system of reasoning. Now, my own opinion is, that we shall find that many more one-pound sections will be demanded than two-pound; many more of one-half pound than of both the others together. There are, no doubt, a large number of beekeepers who ought, and are going to change from the two-pound section to something smaller; a larger number, who have not as yet got much of any fixtures of value. Then there are those who are yet to enter our ranks, and out of these three classes we will get enough of that size of sections to fill the demand to come, without any changes on the part of those who, like myself, have a regular all-one-size and style of surplus arrangement, all in working operation on a scale of considerable magnitude and of medium size (one-pound) sections.

For the good of those who are young in the pursuit, let me warn them not to encumber themselves with the great inconvenience of two sizes of sections, unless the demands for a total change are imperative, and the two sizes are not to be allowed to keep company longer than the entire change necessitates.

Since penning the above, I find Mr. Forncrook's circular on my desk. In it I find quoted two sizes of half-pound sections of the following dimensions, viz.: one to be used in the regular

2-inch broad frame. with separators; three tiers of five sections each in each frame, size, 3⅜x2 13-16 plump, x2. The adoption of this size would necessitate the changing of the separators, placing 3 narrower ones in the place of the 2 wider ones, would it not? For sections of this size square, I think Mr. F. has ¼ inch too much. I think I see great advantage in having such a size section 1¾ with separators or 1½ without them.

The second size he proposes is 4¼x3⅜ plump, x1⅜. This section, I fear, is too large a square, and necessitates too much thinning to get the gross weight down to one-half pound. I think the dimensions given will give us a section of about 10 to 12 ounces. I have just cut a paper model of my proposed size, viz., 4¼x2 7-16x1½ without separators, and it looks quite out of proportion; it is too long and narrow, yet if I knew that the bees would work as satisfactorily (to themselves and ourselves) in so narrow a space, I think I can see more advantages in this than any other form. If this should prove too narrow to suit the bees (and its narrowness is advantageous in every other respect), then I am in favor of Mr. F.'s 3⅜x2 13-16 in the section, only I want it 1½ inches instead of "1¾ without separators," as he has it. This size will have a few minor advantages over any other mentioned. and, no doubt, suit the instincts of the bees well. I think it will weigh the plump one-half pound. I hope, in a few days, to have the opportunity of talking with one of our brightest apiarists, one who has had experience in the narrow section matter, and if he favors the one point of the narrowness, as mentioned above, I shall stand firm for the 4¼x2 7-16x1½, as the coming one-half pound section.

Do not confound the words, narrow and thin. By thin, we mean that which decides the thickness of the comb.

Let us hear the opinions of all who think their experience has told them something bearing upon the subject, and let your ideas of the best shape work without any bias because of any fixtures or pet theories you may have on hand.

The truth will soon come uppermost and he who gets there first will have the honor he justly deserves.

Let us settle this, in theory, at once, so that we can resettle it in practice during the season of 1883.

Dowagiac, Mich., Dec. 19, 1882.

For the American Bee Journal.

Eastern Indiana Convention.

The bee-keepers of Eastern Indiana met at Richmond, on the 20th of Dec., and organized an Association to be known as "The Eastern Indiana Bee-Keepers' Association." Dr. E. H. Thurston was called to the chair, and stated the object of the meeting and the advantages to bee-keepers and all interested in bees and honey, of such a bond of union. He appointed S. N. Replogle, Hagerstown; and William Kitran and E. Parker, of Richmond, as a Committee on Constitution and By-Laws.

The officers for the year were elected as follows: President, Dr. E. H. Thurston, Hagerstown; Vice President, Dr. L. C. Johnson, Fountain City; Sec., M. G. Reynolds, Williamsburg; Treasurer, Jacob Norris, Richmond, Ind.

The Constitution and By-Laws reported by committee after some discussion were adopted. Various topics of interest were discussed, viz.: "The Best Bees," "Which is the Most Profitable, Comb or Extracted Honey?" and "The Best Method of Wintering."

S. N. Replogle said he formerly wintered his bees in a cellar (built for the purpose), but now had his 72 colonies all in chaff hives; had tried both methods for three years and found that the chaff hives gave the best results. He did not think there could be anything better. He said that the 2½ acres of sweet clover, planted six years ago, bloomed the second year, and after the third year had continued to bloom each year; the bees worked on it from morning till night; and said that he should increase the acreage and advised all to try it.

Adjourned to meet at Richmond, on Wednesday, April 1, 1883.

M. G. REYNOLDS, *Sec.*

For the American Bee Journal.

Another Step in Advance.

DR. H. BESSE.

In my opinion, bee culture should, in its present advanced condition, be reduced to a science founded upon knowledge, comprehension, understanding, and a collection of the general principles and leading truths relating to apiculture.

It is expected that all advanced apiarists are prepared to do their work scientifically and in order, but this "advanced step" would stimulate and prepare young men, and those beginning the business, to qualify themselves, so that they would be prepared to readily enter into the labors of a large apiary at once. To be qualified for this they should be "graduates" in bee culture in all its branches; and in order to secure such honors they should possess the following qualifications, at least, and furnish good evidence of the same—to wit: a good character in all respects and an experience of at least one year in all the manipulations of the apiary; for all of which they should furnish certificates from some well-known apiarist, stating their qualifications and adaptability to the business.

After passing a satisfactory examination before a Board, that should be appointed by the North American Bee-Keepers' Society, they should receive a diploma, signed and sealed by the president and secretary, as well as the judges that examined the applicants. Such a diploma would be a first-class recommendation in any part of the world, and any apiarist would feel safe to employ and trust such a graduate. I repeat that none should so graduate except those that have earned their degrees by honest toil, study and experience in the apiary, and of such qualities as to do honor to the "North American Apiarian College."

This institution should be a corporate body, to give it stability and permanence, with power to act in a judicious manner. Applicants for honors should attend the sessions of the North American Bee-Keepers' Society, and be examined during such meetings.

All graduates should pay, say $10 or more, and be constituted life members of the society.

All present members of said society that could *pass an examination* and comply with the above rules, should be graduated, and then our profession would rank second to none as to respectability. Now, let us talk this matter up, through the BEE JOURNAL, and see what can be done at the next meeting of the North American Bee-Keepers' Convention. My object in writing these few scattering thoughts is to get the subject into more competent hands, and thus assist in my feeble manner to elevate to a still higher standard our beloved calling.

Delaware, Ohio.

Prairie Farmer.

Management of Bees in Winter.

MRS. L. HARRISON.

We think it is best not to disturb bees in cold weather; provision them in fall with an abundance of stores to last until warm weather; protect them against cold, according to the climate they are in, and then let them alone; both bees and their master resting. These industrious little insects, that have toiled so faithfully all summer, should have all the good honey they want to eat.

Many bee-keepers found out to their sorrow, that it "didn't pay" to rob bees of their winter provisions, and substitute a diet of glucose. They saved their honey, but the bees were *non est*. Some advocate removing the honey from the hives in the fall, and then feed a syrup made from coffee and sugar, until they have a sufficiency for winter. This may be necessary when the honey flow is cut off by early frost, and bees work on the refuse of cider and sugar-cane mills, as this substance is not honey and sours when unsealed, breeding disease and death; but, when bees have nothing but good honey in their hives, let them enjoy it, for it is the food their Creator provides for them.

Many small after-swarms perish during winter with starvation. All such colonies have young queens, and might be the very best their owner had, the next season, if provided with food. If, through oversight or neglect, any such swarms have not been provided for, they might yet be saved, if living, by inserting alongside of the cluster, frames of honey. If this cannot be done (as all bees are not in frame hives), a food composed of honey and sugar made as follows might be given: Good sugar and honey are mixed together thoroughly until it is thick enough to make into cakes, or roll into sticks like candy. A cake of this kind could be laid over the cluster, or a stick of candy inserted into it. In cold weather, bees might perish with plenty of it in the hive, if it was not close to them.

We know a lady who fed liquid food to bees all winter, by giving them just enough each day for their wants, and they came through all right. But such feeding as this does not pay, as it entails too much care and thought; and if they should be neglected or forgotten for a day or two, they would die, and all the food previously given, would be lost. In feeding, great care should be given, lest cold draughts are made, that would be fatal to them, and in feeding liquid food, many bees would perish in the feeders by getting chilled, if everything is not snug and warm.

Peoria, Ill.

For the American Bee Journal.

The Winter Ventilation of Bees.

DR. G. L. TINKER.

In the consideration of the wintering problem there will be few to disclaim the statement that the only really troublesome factor which bee-keepers now have to contend with, is the best mode of winter ventilation. To this extent then, it may be well said that the problem has been fathomed. In presenting this paper, it is with the hope that it may soon lead to a solution of the last remaining question.

No bee-keeper of experience has failed to notice the fact that bees wintered on the summer stands by the old, unprotected method, require far greater ventilation than is usually given. Few colonies survived the winter of 1880-81, that were not well ventilated; and those that came through strongest generally had free ventilation at or near the bottom of the hive, the top being sealed up as tight as the bees could make it. Several remarkable instances of wintering in box hives raised from the bottom-boards ½ inch, or provided with very large entrances, came to my knowledge, in one of which the space allowed was nearly 50 square inches. It has been stated that colonies have been wintered in hives without bottom-boards, giving a ventilating space of over 100 square inches (see article by Mr. R. Corbett, page 215 of the BEE JOURNAL). It is my opinion that, in wintering in the unprotected hive, no upward ventilation should be allowed even through a chaff cushion.

If the inside capacity of the hive be small the entrance should be quite large, not less than 24 square inches of space, if no upward ventilation is allowed. But if the hive be very large, or if there be a large air-tight space above the bees, the entrance may be as small as ½ inch by 10 to 12 inches, according to the strength of the colony. It does not appear that moisture collects in a large hive as it will in a small one with the same size of entrance.

It is the instinct of the bees to seal up air-tight every part of a hive but the entrance, the object being apparently to provide against the loss of heat. They are especially particular to seal up the upper parts of the hive. The conclusion is therefore unavoidable that the natural mode or ventilation is at the entrance or near the bottom of the hive. We must further conclude that if we regulate the size of the entrance to meet their necessities and give the hive proper protection, we cannot fail to have success in wintering, either in chaff hives, cellars, bee-houses, or clamps. We have the statistics, moreover, to show that the latter conclusion is not ill-founded. That the natural mode of ventilation, however, will give better results than any that the ingenuity of man can devise, remains for further experimentation to decide.

If we change the conditions in which bees are usually found in a state of nature, if we enclose a colony in a small space upon a few combs and give proper protection, we shall undoubtedly change their necessities in regard to ventilation. "Heat is life," or one of the essentials of life, which the instinct of the bees has taught them to carefully conserve. If we conserve it by the above means, or any other means, then upward ventilation becomes of possible and advantageous utility, otherwise not.

"The prime object to be obtained by any method of wintering, other things being equal, is to prevent the accumulation of dampness in the hive," according to Mr. Poppleton, whose views on this subject will stand the test of time. The natural mode of ventilation which may be depended upon to prevent an accumulation of dampness in a hive has been given. There are two other modes that have been successfully practiced, each having distinct features, but providing for upward ventilation to carry off the dampness. These modes are often greatly varied or blended into each other. Their distinctive features are as follows. We will take the old Langstroth hive for illustration. First mode: The hive is left with the bees upon all the 10 frames of comb containing from 30 to 50 lbs. of honey. The honey-board is left on with two 1½ inch holes through it and sealed to the hive air-tight. Nothing whatever is placed in the cap which fits loosely, or it may be raised slightly by small nails at the corners. No opening in the caps, or auger holes, to permit free movement of air, is allowed, but the small crevices permit a very gradual but certain egress of the dampness from the hive. The entrance is left open the full width of the hive, or not less than ½ inch by 10 inches. This is essentially the mode practiced by Mr. Heddon, who varies it only as follows: He leaves off the honey-board and places burlaps over the inverted honey-rack, leaving a space of ¾ inch above the frames. A case 4 inches deep is put on top and filled with chaff, planer shavings or leaves. The cover of the case is raised at the corners by small nails, and the entrance left ½ inch by 10 inches. Only forest leaves or other loose packing over the burlap is proper by this mode, for the reason, that a colony of bees in a large space do not generate heat enough to force the dampness upwards through heavy packing. If heavy packing over the frames is desired where all of the brood combs are to be left in the hive, the ventilation could be secured by two 1½ inch tubes to connect with the openings in the honey-board. These would permit the dampness to pass upwards into the cap as in the typical mode. A case to hold the packing would be required, in addition, the cap to be fitted over it. It will be noted that the ventilation is free as in the natural mode, but no draft of air through the hive is possible. That it is any improvement over the natural mode is very doubtful.

MASS. AGR. COL.

The second mode is as follows: Instead of leaving the bees upon 10 frames of comb they are crowded upon only 5 by division-boards, the space between the division-boards and the sides of the hive are well packed, as well as the outside of the hive. The honey-board is left off, and a few ½ inch square pieces of wood are placed over the frames crosswise. Stout, porous cloth is laid over them and a case 10 inches deep is set on top to be filled with chaff or dry sawdust. The cap, with a 2 inch auger hole in each end, allowing a free movement of air through it, is placed over all, and the entrance left ½ inch by the distance between the division-boards. By this mode the heat of the bees will drive the dampness out of the hive and upward through the packing most effectually. Upon passing the hand down into the packing next to the frames it will be found sensibly warm and dry all winter. That it is the heat alone that forces out the dampness it seems to me most probable. At all events, a colony of bees prepared in this manner are in a most formidable condition to withstand cold and dampness, which are the primary causes of dysentery. It is provided, in this mode, as well as the others, that the colony has plenty of young bees, plenty of stores, and winter passages through all of the combs; and also that high winds are prevented from striking the entrances of the hives by suitable means. That the latter mode above described is the best for out-door wintering admits of little doubt, but it requires more labor in preparation for winter.

The plan of "crowding the bees upon a few combs" is recommended by Mr. D. A. Jones, Mr. Poppleton, and a number of other prominent bee-keepers, the former holding that in in-door wintering it is advantageous also. I have many very interesting statistics obtained in 1881 that demonstrate the advisability of crowding a colony of bees upon a few combs in out-door wintering. But it is deemed unnecessary to give them, as the measure is well nigh self-evident, if we place any considerable packing over the bees, with the expectation to get upward ventilation.

But all this will apply only to those plans of wintering which involve a low temperature, or a point below 50° Fahr., and a semi-dormant condition of the bees. In some northern localities, wintering by the "high pressure plan" of Mr. Ira Barber (see page 725 of the BEE JOURNAL) in which the bees are kept at a temperature not much below 70° Fahr., do their own ventilating, and eat pollen with impunity all winter, may be very desirable. Mr. Barber and his neighbors have wintered their bees for many years by the plan given, with very trifling losses. It also has the sanction of the very learned Dr. Dzierzon (see translation of Mr. Kohnke, page 153 of the BEE JOURNAL), who says: "It is my conviction that the average temperature which bees enjoy during their working season, which is from 60° to 70° Fahr., is most conducive to their well-being in winter also." While a large quantity of bees are lost by running or flying out of the hives (about 3 bushels to 100 colonies), it is likely that as many would be lost in a given time by any other method of wintering. The plan would be salutary in one respect, it would not be hampered by differences of opinion on the best mode of winter ventilation at high temperatures.

New Philadelphia, O.

For the American Bee Journal.

Eastern Michigan Convention.

The Eastern Michigan Bee-Keepers' Association met in Detroit, Michigan, Sept. 26, 1882; as the meeting was not the annual one, no business of importance was brought up, and topics for discussion were immediately brought forward. Among them were:

How large should the lower story be? Not less than 2,000 square inches.

What is the best absorbent to use in the upper stories? Sawdust, short shavings, chaff, or hay seed.

What is the best plant to grow for bee pasture, when its other qualities are considered? Alsike clover; it is a good honey plant, and makes excellent hay; it prefers a damp soil. Mr. Hunt sows 4 pounds of seed to the acre. Mr. Cottrell esteemed raspberries very highly.

What is the best plant for honey alone? Figwort first, and then motherwort. Mr. Moorhouse thought that certainty of yield should be considered.

How often should hives be examined? Several thought at least five times a season, but that surplus honey should not be allowed to accumulate.

How much food is necessary for winter? From 20 to 30 pounds.

When the construction of hives was spoken of, Mr. Higgins said he made the ends of his 1½ inches thick; this, beside securing greater protection, was a convenience when handling the frames, as it admitted of wide rabbets.

Several other questions of minor importance, were also discussed.

A great deal of interest was taken in the meeting, and the attendance, which was larger than at any previous time, has been steadily increasing since the organization of the society. Delegates were appointed to attend the national convention to be held in Cincinnati.

Adjourned to meet at the call of the secretary in the spring of 1883.

A. B. WEED, *Sec.*

In looking over some papers I found the above Report; by an oversight I neglected to send it to the JOURNAL immediately after the meeting. I send it now, hoping that it may still be of use.

I was much interested in the article on wintering bees, by S. Corneil, which appeared lately; it contained very interesting facts, and was without the personalities which are contained in the communications of some apiarists.

I think that the enterprize of the JOURNAL is one of its most prominent characteristics. A. B. WEED.

For the American Bee Journal.

Separators a Necessity.

J. V. CALDWELL.

The use of separators having become to me "a necessity," and as some prominent apiarists seem to think "they are a useless appendage" in the modern bee-hive, a little discussion, *pro* and *con*, will not be out of place, to all who have the good of the profession at heart. Now, in the first place, let me ask will it pay to use them, counting the extra cost.

That we can have fine straight combs, that can be crated and shipped without damage, and consequent loss, and yet have them built without separators, I am not ready to admit. In the BEE JOURNAL for Dec. 20, the opinion is advanced that, at least in the production of honey in one-half pound packages they will not be needed; but as the reason is not made apparent, perhaps some one will rise and explain.

It is just possible there may be certain conditions in which we may get good combs without them, but I have yet to find them. It has been said the hive must be full of bees, and honey coming in fast, then, with sections filled with good thin comb foundation, no trouble would be experienced.

Well, during the past season I determined to give this matter a fair trial, and so prepared six good colonies, with upper stories filled with wide frames, all being filled with one-pound sections, and each containing a full sheet of thin foundation; thus giving them such good facilities for comb building, that I thought, if ever good combs could be had without separators, I would have them. The result proved exactly the reverse. The honey season being a good one, the bees soon built them out and filled them with honey, but when I came to crate these same boxes for market, more than one-half had to be laid aside for the home market;—and even then, they are a "bother and vexation of spirit," as they are sure to crowd against each other and start the honey to leaking; and these combs, be they bulged ever so little, are likely to have the caps of the cells broken, if they but touch each other. It seems to me the only advantage we could gain in discarding them, lies in the fact that more honey can be stored in the same box; but this is of little account when we sell the wood in the box at the same price as the finest honey. Supposing, then, we must use separators, shall we use wood, tin, or paper? I have never used anything but tin, though I am assured by a friend of mine, who uses wood entirely, that it is just as good as tin. However, another important item comes in here. Will as much honey be stored with, as without them? I have thought some seasons the bees were reluctant to work among them; then, again, they seemed to pay no attention, but worked as busily as though no separators were present. Let us hear from others on the subject.

Cambridge, Ill., Dec. 23, 1882.

For the American Bee Journal.

Small Sections for Honey.

F. C. BENEDICT.

By the report of the Michigan State convention, I see that the above subject was discussed, and seemed to gain favor with some of our producers. As was remarked, bee-keeping is progressive, but let us be careful not to progress in the wrong direction. The small sections meet with ready sale, in limited quantities, at fair prices, but as soon as we place them upon the market in quantities that shall reduce the price below a fancy figure, then will the producers become losers.

A prime colony of bees will produce one-third more honey in pound than half-pound sections. To obtain 1,000 pounds in half-pound packages, you must handle and make double the amount you would to get the same in one-pound packages, besides one-third more work while upon the hives. In order to obtain the same amount of money one must get one-third more in price for the half-pound sections than for pound sections, and the extra work of making and handling the smaller ones must not be taken into consideration. I speak from three years' experience with the different-sized packages, and I write this article to place the subject in its true light, so that those who are going to use the small packages may not be disappointed in the result, for I know that half-pound packages cannot be used in large quantities with profit to the producer.

While progression is our motto, we do not want to progress in a direction that shall cause our purses to get any leaner than by producing large packages, for the sake of supplying an unnecessary demand. The small package should be used as a dessert, to give our product a little more variety, when placed upon the market.

No producer can afford to use half-pound packages exclusively. I think I am safe in saying that J. C. Newman & Son, of Peoria, N. Y., were the first to place the half-pound sections upon the market in any amount, in 1879. They took well. In 1880 they used 4,000 half-pound sections, and I used the same amount; but we found we were the losers by using so many, for we could have obtained double the amount in 2-pound sections. Newman & Son, W. S. Benedict, and myself are the only ones that have used the half-pound sections to any extent, and we would advise, from experience, to use but few, to help make a variety. When we get below one-pound packages, generally, we get below what is practical or profitable to the producer.

Perry Centre, N. Y., Dec. 22, 1882.

For the American Bee Journal.

Who Are Our Best Breeders?

G. W. DEMAREE.

The article of Mr. James Heddon, on page 773, vol. 18, of the Weekly BEE JOURNAL, is calculated to excite much inquiry into the numerous methods employed to collect, select and breed up the honey bee to the highest standard of excellency.

It should not be forgotten, however, that, like the most of us, Mr. H. has adopted a theory of his own, and is therefore, not likely to look favorably upon the plans and methods of others, whose views and plans differ materially from his own.

With my imperfect mental vision, I can see, in these numerous plans, views and methods going on all over our land, the greatest possible promise of success; while, on the other hand, if all should accept the views of Mr. Heddon or Mr. Briggs, or any other breeder, the consequences would be that all would succeed or all would fail together, and, in the latter case, leaving nearly the whole field unexplored, much valuable time would be lost.

Speaking for myself, I rejoice to see the good work going forward, knowing this—that *time*, the greatest of all arbiters, must pass the final judgment.

Mr. Heddon says: "If a popular vote could now be taken as to who our best queen breeders are," etc. Perhaps I have as much faith in the intelligence of our "popular voters" as most people have, but I would not give much for a decision obtained in that way, simply because it is impossible that the popular voters could know, from their personal knowledge, the qualifications of each breeder.

Those persons who turn out hundreds of queens by means of the "lamp nursery" and weak nuclei, on the same principle that the compost heap sends forth swarms of flies, are not "breeders," they are simply multipliers of bees. To be a breeder worthy of the name he must be something of a physiologist, must know something of the laws of cause and effect. He should be well acquainted with the methods employed and followed by the master stock-breeders of the past and present. Thus equipped, he pursues his course, not without chart or compass, and if he succeeds in controlling the drones or male bees in his vicinity, he is bound to succeed in his undertaking or prove to his own satisfaction that the honey bee is an exception to all the rules of past experiences.

The modern laws of breeding point out but two great objects to be gained by following them. The one object is to breed from stock, improving the same by careful selection—the experiment being applied to one or a dozen races by the breeder if he chooses, keeping each separate from the others. The other is to breed up and establish a thorough-bred race or races, the result of combination of blood and best qualities of several races concentrated in one fixed type or race.

This is the modern idea of "thorough-bred" stock. Originally the term "thorough-bred," as applied to stock-breeding, meant no more than perfectly or thoroughly bred stock. It evidently now means more than that. It means a judicious cross of the blood of several races, bred up to a fixed type by careful selection.

I believe it is an admitted fact that no breeder has ever succeeded in establishing a fixed race by crossing the blood of just *two pure races*. Hence, Mr. Heddon's experiments, however, strongly he may insist upon the correctness of his premises, will come to grief, sooner or later.

A cross between the Italian and German races will give mongrel hybrids, without fixedness of character or uniformity of any kind, no matter how far the experiment may be carried. Those of us who remember how this class of hybrids looked twenty years ago, see them to-day just as we saw them then.

"CHIDE ME GENTLY."

A short time ago, Mr. Heddon's "dark bees" could gather greater quantities of honey where the light Italians could get none. Now, he sees only a "good season" as an explanation of Mr. Shuck's good report. Also, the secretary of the Michigan State Convention reports him as saying that the light bees are more gentle than the "dark bees" are. "Who'll be the next?"

If Mr. S. A. Shuck will look on page 1, volume 17, AMERICAN BEE JOURNAL, he will see that the pole and thread experiment was tried two years ago, and the actions of drones noted.

Christiansburg, Ky.

NewJersey and Eastern Convention.

The fall meeting of this society was held in New Brunswick, N. J., on Wednesday, November 1, 1882. Mr. G. W. Thompson, the President, on calling the meeting to order, delivered a stirring extemporaneous address.

Delegates were received with an address of welcome by the President, from the Philadelphia Bee-Keepers' Society, and were made honorary members. Prof. Geo. H. Cook, Ph. D., L. L. D., of Rutgers College, State Geologist and Superintendent of the New Jersey Agricultural Experimental Station, was also elected honorary member. Dr. Townsend, of Philadelphia, and Prof. Kroek of Hoboken, were appointed to fill the vacancies in the committee on question drawer.

Mr. Rue, of Manalapan, chairman of executive committee, reported a programme of exercises, first on which was a paper on "Clamp Wintering" by C. J. Robinson, of Richford, N. Y., which was read by the secretary.

Mr. King highly disapproved of Mr. Robinson's plan. Bees, he said, needed a great deal of ventilation to carry off the carbonic acid generated in breathing; and it was his opinion that it would ruin bees to confine them in such a clamp without ventilation. A theory was started a number of years ago, that bees needed so little air, that they could be corked up tight in a bottle and live for months. He had tried the experiment, and had found, that after remaining in the bottle one night, the sides of the bottle were covered with moisture, and that the bees did not survive twenty-four hours. He thought the best way to winter bees was on their summer stands in chaff packed hives. Another consideration was, that bees in such a clamp, would not breed so as to be ready for the early harvest; while bees on their summer stands commenced to breed by the middle of March, and are strong with young bees by the time the bees from the clamps are set out.

Mr. Cook, of Caldwell, thought that bees might be wintered successfully in this way, but they would suffer from spring dwindling when set out, as from any kind of in-door wintering. Besides the plan was too expensive.

Mr. Rue thought the plan might do well enough in cold localities, but that it was entirely unnecessary in New Jersey, as bees wintered well here on their summer stands.

The Secretary thought that the subject of wintering was yet the most important that bee-keepers could discuss. He had wintered his bees always out of doors, far north, in New York State, and also in New Jersey, and while, with plenty of honey, he could keep every colony alive, yet from the opportunities he had had of studying bees wintered inside, he had concluded not to winter longer out of doors. At every warm spell, in the middle of the day, the bees out of doors leave the cluster and go to the outside of the hive to carry honey into the middle of the cluster. It soon grows cold enough to chill a great many so that they do not return. Thus the strength of the hive is decimated worse in New Jersey than in higher latitudes. Mr. Robinson's plan seemed the most practical way of protecting bees in winter. Many persons in this age are greatly troubled by carbonic acid, more in imagination than in reality. He thought the bees could stand all the carbonic acid generated all winter in their semi-torpid state. It was idle to talk of the bees being ruined in this plan of wintering, as it has been practiced for years by Mr. Robinson; and he reports that he can winter successfully very small colonies and that he has never lost a single colony in the clamps. Mr. Hutchinson, a prominent bee-keeper of the West, had tried the plan last winter, under Mr. Robinson's direction, with a part of his stock, and had not ruined his bees; but was so well pleased, as he reported to *Gleanings*, that he expects to winter largely in this way the coming winter.

Mr. King said he learned from neighbors of Mr. Robinson, that his theories of wintering bees were better than his practice.

Prof. Kroeh thought that it would do no good to theorize as to whether bees would winter in this way; no theory could stand against a fact, and as bees have been wintered in that way, that settled that it could be done, and now it remained for us to explain how they were able to live, without the air seemingly necessary to support life. He would suggest that Mr. Robinson did not exclude the ventilation as effectually as he thought. Quite probably the air penetrated the covering.

Dr. Townsend said, that as a physiologist, he believed that a constant supply of fresh air was necessary to the support of life, and he thought that air undoubtedly penetrated the covering.

The President said that he too believed that air came through the covering. Air would get through lately moved earth for a great distance. A neighbor of his had been building a silo, and had made one side of it by a bank, six feet thick, of ground dug out of the pit. He believed air would penetrate the bank, enough to spoil the fodder.

Next on the programme, was a paper by Prof. Cook of the Michigan Agricultural College, on a "Plan for Gathering Bee Statistics."

Mr. King said that accurate statistics of the honey product had never been gathered.

Mr. Poole inquired why they could not get all the statistics required from the census reports ?

Mr. King answered that those reports were worthless, as far as bees and honey were concerned. Mr. Landreth, when at the head of the Agricultural Bureau, had told him that, although the census reported a honey crop of 15,000,000 lbs., he had data in his possession showing a yield of at least 35,000,000 lbs.

On motion of Mr. Cook, the association adopted the plan of Prof. Cook, and Mr. Rue was appointed a committee of one to put himself into communication with the National Association for the purpose of endeavoring to carry out this plan.

The next paper on the programme was by the Secretary, on "Too many Eggs in One Basket."

Mr. Cook said in one light the paper was right; but in another it was wrong. Men to succeed in anything, must focalize their energies, and learn one business well, and do that in a proper manner.

Mr. King said that the Secretary was unfortunate in keeping his bees in a poor location, or from practicing too closely Mr. Robinson's theories, or from too much carbonic acid, and hence spoke in a discouraging manner. He said he could name multitudes of specialists who had made a great deal of money in bee-keeping—among whom were G. M. Doolittle, Harbison, and Jas. Heddon. He said bee-keepers were a good deal like miners standing around a hole, who, when others were around, acted as if there was nothing in it, but when they got a chance, just raked out the gold dust. Mr. Betsinger had told him that he had made an average of 100 pounds from every colony ever since he had been in the business.

Mr. Poole said he had been enticed into the bee business, by supply dealers, especially by the President, Mr. King, and the Secretary. He had taken a great deal of honey the last season, but yet he agreed with the paper, that the bee business, like the poultry business, was not adapted to be carried on on a large scale. He did not value it for the money there was in it, but for the pleasure it afforded him and for the valuable lessons he could get from it.

The report of the committee on question drawer was next in order.

The first question—"Can Virgin Queens be Introduced Successfully?"—was answered by Prof. Kroeh. Yes; by putting them into the hive when less than one hour old, without a cage.

Mr. King could introduce a virgin queen several days old, by spraying her and the bees with peppermint water and making them all crawl some distance to the hive.

The question—"How can Nuclei be United for Wintering?"—was answered by Mr. King. He said that he took frames from at least three nuclei and set them close to the hive he wished to use. Then he put them quickly into the hive and closed it. The bees from so many hives were too much confused to quarrel or injure the queen.

The question—"Are Winter Passages Through the Combs Necessary?"—was answered by Dr. Townsend in the negative. He said that the holes mutilated the combs too much—that the same end could be attained by small sticks laid across the tops of the frames.

Mr. King said he stretched canvas on sticks, so as to have an open space above the frames. On this he placed the cushion.

Prof. Kroeh said he used to put sticks over the tops of the frames, bent in the form of a bow, by putting the ends against the sides of the hives, thus making an open space above the combs, where the bees could cluster; but upon reflecting that there was no honey for the bees in this space, where they were made to cluster by the warm air all ascending there, he had abandoned the plan.

Mr. Cook said that in visiting Capt. Hetherington's apiary he had seen little coils of tin, permanently fastened near the middle of each comb, for winter passages.

Mr. Poole said that he put a frame, covered with wire cloth, over each of his hives, so that he could lift up the cushion and see what the bees were doing, without their being able to see too much of him. He considered this an excellent plan, although the worthy President had told him that he would not have the things on his place. On examining his bees in winter, he observed a constant current of bees over the tops of the combs. He kept a couple of colonies in a bay window, in a parlor. The heat in the parlor in winter did not go above 45° and the bees were quiet and did not fly out when the weather was unfavorable.

The next question—"How Long will a Queen Remain Profitably Prolific?"—led to a lengthy discussion on a theory of Ulivi, that queens are fertilized inside the hive and frequently. Prof. Kroeh, although undecided as to the truth of the theory, gave an account of some of Ulivi's observations and defended his conclusion.

Mr. King said that the theory could not be correct, as they sent Italian queens to Dakota, New Zealand and other places where Italian queens had never before been sent. They were put into hives of black bees and continued to produce pure Italian bees, when there could have been nothing but black drones, if any, in the hives, for a long time.

The Secretary pronounced Abbe Ulivi a "crank." His theory was against the most ordinary facts constantly observed by every bee-keeper. Nothing was more common than to see a queen from a black colony filled up with black drones becoming fertile by an Italian drone from a neighboring apiary, and the opposite. This cannot be explained on the theory of Ulivi. Every bee-keeper has seen his young queen fly off unincumbered and return in a short time with something attached, which Ulivi says is excreta. If all his pretended microscopical investigations are of the same kind as this, they are obviously worthless, as any one can see with the naked eye that they are the copulative organs of the drone.

He had examined them carefully under the microscope and always found the appendage to be torn parts of the drone. He and several other persons had seen this copulation take place before their eyes, and always saw a lacerated and dead drone as the result. He had, in conducting some experiments, kept six young queens shut up in nuclei, well supplied with drones, till after they had been laying several weeks, when it was found, in every case, that they apparently had not been fertilized in the hive, as all the eggs they laid produced drones.

Prof. Kroeh said that to show what chance there was for loop-holes in observations, he would say, that Ulivi had found with his microscope that the vagina of the queen was entirely too small to be entered by the organs of the drone.

Several members were on their feet to explain how the copulation was effected, but as many members had to take the train then nearly due, a motion to adjourn prevailed, New York city being selected as the place for holding the spring meeting.—*Bee-Keepers' Exchange.*

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☞ The time for the usual winter rush of correspondence is here, and we wish to impress upon all our patrons the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

SELECTIONS FROM OUR LETTER BOX

Well Pleased with Progress Made.

The Bee Journal is full of interest. I have been pleased by the progress made by bee-keepers in apiculture and hope that this science will eventually be fully developed. I had 2 colonies of bees last spring, one of which swarmed twice; the second swarm escaped while being hived. From the first swarm and parent colony I took about $18 worth of honey in 2-pound boxes. The other stored none and did not swarm. The 3 colonies are packed with timothy chaff, on their summer stands, with plenty of bees and plenty of honey for winter.

Wm. A. Brundage.

Lodi, N. Y., Dec. 22, 1882.

Do Bees Hear?

On page 803, of the Bee Journal for Dec., 1882, reference is made to certain remarks of Sir John Lubbock, and the influencing of bees, when swarming, to settle by making loud noises, etc., etc. I am decidedly of the opinion that it is not to the sense of hearing on the part of the bees, that the custom of beating tin cans, etc., took its rise, but to the sense of hearing in the human family, and why? For the simple reason that the ancient laws relating to bees, vested the ownership in a swarm only to him from whose grounds they departed, provided he followed them, and kept them in sight until they alighted. Now, what more natural than to "kick up a row" for the sole purpose of letting others know that the bees seen in flight were being followed. I regret that I cannot at present consult my library of bee books and give the words of the ancient laws. I think the wording would go far to prove my hypothesis correct.

Arthur Todd.

Philadelphia, Pa., Dec. 25, 1882.

Brood Killed by Overheating, etc.

Owing to changing my location and moving my bees, last spring, my success has not been as great as it otherwise would have been. I sold a part of my bees; moved 21 colonies; lost 1; bought 20; increased to 67; obtained about 1,600 lbs. of comb honey, and 400 lbs. of extracted honey. I might have extracted from 600 to 800 lbs. more, but was called away on other business at the proper time for extracting it. The most of my swarms came out late but gathered an abundant supply of honey to winter on, and many of them some surplus. One swarm came off the 20th of Aug.; on the 25th of Sept. I took 23 lbs. of comb and 24 lbs. of extracted honey and left six nice frames for them to winter on. I thought that doing well, but when I read in the Bee Journal of colonies giving from 400 to 600 lbs. each, of surplus (which, by the way, looks a little "fishy"), I feel like having nothing to say. Would it not be well to have the *modus operandi* by which such yields are obtained? Or would there be danger of glutting the market? You will perhaps recollect, Mr. Editor, that I wrote you in July last, asking your opinion and advice in regard to what I feared was foul brood, but which proved, as you surmised it would, to be "parboiled or overheated brood," caused by not giving proper ventilation in moving. If agreeable, I will, at another time give you my experience in getting rid of the dead brood and building up the colonies, which I succeeded in doing very successfully. I do not want to miss a single number of the Bee Journal; it is indispensable.

Reuben Havens.

Onarga, Ill., Dec. 26, 1882.

My Report.

I commenced the spring with 5 good colonies and one that was queenless; increased to 25, by natural swarming; all in good condition. I obtained 1,032 pounds of comb honey.

L. Fatzinger.

Janesville, Wis., Dec. 20, 1882.

Wintered without Loss in the Cellar.

In December, 1881, I put 29 colonies in my cellar, and did not disturb them till spring. They came out "with flying colors" on the 15th of the following April, all in good condition, without the loss of a colony or a queen. I sold 15 colonies at $10 each, which left me 14 to commence the season's work. By natural and artificial swarming they increased to 60 colonies during the season. I also realized about 3,000 lbs. honey, being about equal parts of extracted and in the comb. We had an abundant flow of honey for about six weeks. Bee-keepers are greatly encouraged in these parts. Long life to the Weekly Bee Journal. I would not do without it for ten times it cost.

G. W. Stark.

Holmesville, Neb., Dec. 25, 1882.

Packed on Summer Stands.

My season's work with the bees has been satisfactory. I started with 55 colonies on June 7, 1882; increased to 250 colonies; had 3,500 lbs. of comb honey and 500 lbs. of extracted; total 4,000 lbs. I have sold about one-half up to date, at an average of 17 cents per lb. My bees are all packed in leaves, on their summer stands, and look comfortable.

H. S. Hackman.

Peru, Ill., Dec. 21, 1882.

Sections too Small.

Our bees seem to be wintering nicely so far; the winter has been favorable, up to the present time; we have had but little cold weather; the mercury was down to 10 below zero, on the morning of Dec. 7th, but the cold wave was of short duration. I have just read the article on the size for the half-pound sections, or "The Section for the Future," I give it as my opinion that the size of the section will have to be reduced, making allowance for the comb to be the usual or nearly the usual thickness. I think it will be found impracticable to retain the usual sized section and force the bees to build *thin* combs. However, I think if it is done, that separators will have to be used; if sections are put on the required thickness. Allowing the combs to be ¾ of an inch thick, supplied with foundation (without separators) it will be found that some of the combs will be about the usual thickness, while others will be very thin; perhaps only drawn out on one side. I merely give it as my opinion that when the object sought is accomplished separators will be used, allowing just the space required, and I fear that bees will be slow to commence work in such small spaces.

L. G. Purvis.

Weston, Mo., Dec. 22, 1882.

My Season's Work for 1882.

I commenced in the last spring with 30 colonies; 25 fair and 5 weak ones, (Italians and hybrids). I have increased 100 per cent.; taken 110 lbs. of extracted and 20 lbs. of comb honey, per colony, spring count. I am selling the honey, in the home market, for $1.25 for 10 lb. tin pails, and 65c. for 5 lb. tin pails. We had honey dew for about six weeks, mostly on hickory leaves, which seemed to be dripping wet with the dew. The leaves finally died, apparently from the effects of the dew. The bees visited the dew quite lively, early in the morning. We had but one light rain during the honey dew flow.

A. S. Edson.

Martinsville, Mo., Dec. 20, 1882.

A Good Showing.

This is my statement of what I have done, the present year, with the aid of the Journal: I took from 14 colonies, 2,400 lbs. of honey, in one and two-pound sections. My best colony gathered 400 pounds, in one-pound sections, and 150 pounds in frames, $9\frac{1}{8}$x$17\frac{5}{8}$ inches. From four of my best I took 1,930 pounds in one-pound sections. I use the Parker chaff hive, improved by myself, which I think is the best hive in use for winter or summer. I have in winter quarters 36 colonies in good condition. I have sold all of my surplus honey for 20 and 22 cents per pound.

W. H. Will.

Bloomington, Ill., Dec. 26, 1882.

Report for 1882.

I put into winter quarters 16 colonies in Hiram Roop's winter-protector and lost 3 light colonies. I commenced the spring of 1882 with 13 colonies and increased to 30. My crop of honey is 1250 pounds of comb honey in 2-pound sections, and 555 pounds of extracted. The bees are in splendid condition for winter, except two light colonies.

I. J. Lucas.

Staunton, Mich., Dec. 26, 1882.

In a Snow Drift.

I dug 7 colonies of bees out of a four-foot snow drift, under which they have been for three or four weeks. They were all lively, and had a little fly, but they did not fly far.

C. W. Young.

Stratford, Ont., Dec. 22, 1882.

THE AMERICAN BEE JOURNAL

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For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

☞Articles for publication must be written on a separate piece of paper from items of business.

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We supply the **American Bee Journal** and any of the following periodicals, one year, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage is prepaid by the publishers.

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The Weekly Bee Journal,	$2 00..	
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Bee-Keepers' Guide (A. G. Hill)......	2 50..	2 35
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The 6 above-named papers.......	6 35..	5 50
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Prof. Cook's Manual (bound in cloth)	3 25..	3 00
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Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

☞The BEE JOURNAL is mailed at the Chicago postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

☞ Attention is called to a few changes in our clubbing list for 1883, as given on this page. Those interested will please take notice.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

☞Renewals may be made at any time; but all papers are stopped at the expiration of the time paid for, unless requested to be continued.

☞ Our new location, No. 925 West Madison St., is only a few doors from the new branch postoffice. We have a telephone and any one in the city wishing to talk to us through it will please call for No. 7087—that being our telephone number.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

☞Do not let your numbers of the BEE JOURNAL for 1881 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

It Pays.—I have sold all of my sweet clover seed. Advertisements in the AMERICAN BEE JOURNAL pay.

J. R. GOOD.

Nappanee, Ind., Dec. 24, 1882.

☞ Attention is called to our *new* and liberal advertising rates for 1883.

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1883, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with $6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For four subscribers, with $8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with $10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

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☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75; or with Bees and Honey, in cloth, $2.50. The Monthly BEE JOURNAL and either of the above for one dollar less.

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THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

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Send your Orders for our Circular, and Prospectus of our NEW BOOK on QUEEN REARING.

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Tested Prize Queen, in a 2-frame nucleus, 9x17, each,	$4 00
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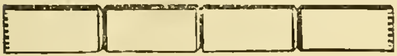

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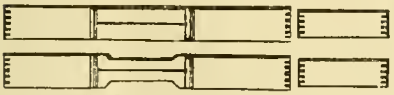

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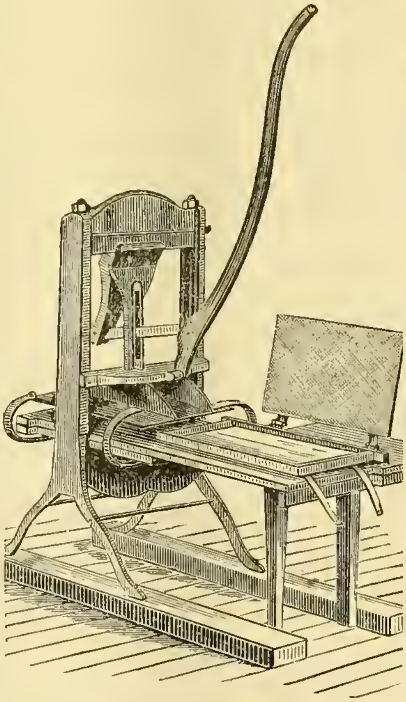

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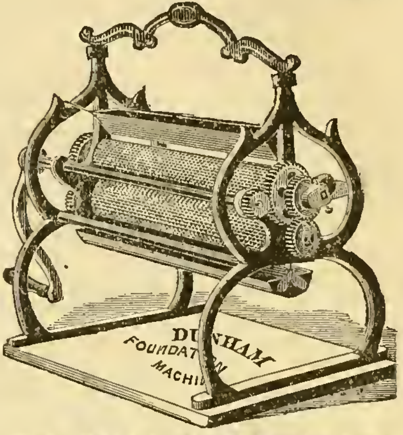

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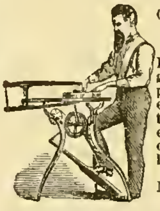

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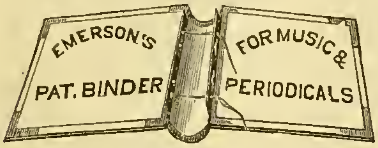

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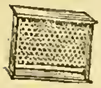

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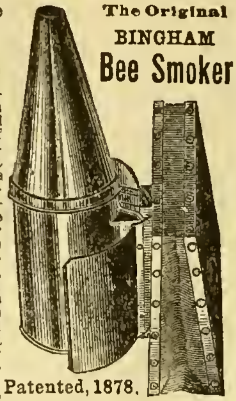

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Honig als Nahrung und Medizin—von Thomas G. Newman. Dieſes enthält eine klare darſtellüng über Bienen und Honig des Alterthums; die Beſchaffenheit, Qualität, Quellen und Zubereitung des Honigs für den Handel; Honig als Nahrungsmittel, angebend wie man Honigkuchen, Formküchelchen, Puddings, Schaumkonfect, Weine, u.ſ.w zubereiten kann; ferner Honig als Medizin mit vielen Rezepten. Es iſt für den Conſumenten beſtimmt, und ſollte vieltauſendfältig über das ganze Land verbreitet werden. Preis 6 Cents.

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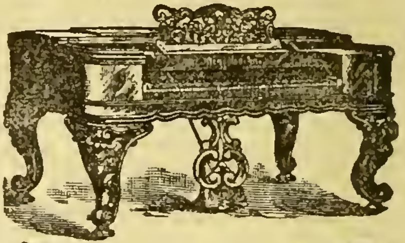

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ESTABLISHED IN 1861

THE AMERICAN BEE JOURNAL

DEVOTED EXCLUSIVELY TO PROGRESSIVE BEE CULTURE.

Vol. XVIIII. Chicago, Ill., January 10, 1883. No. 2.

THE AMERICAN BEE JOURNAL

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THOMAS G. NEWMAN,
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A Honey Feast.—A new and novel way of developing a taste for honey, has been introduced by Mr. Eugene Secor, of Forest City, Iowa. It is worth being adopted in every locality, and would help wonderfully to advertise the honey-producer of any locality. To popularize its consumption should be the aim and object of every producer, and Mr. Secor has found a very neat way of advertising that will pay him well. From the *Winnebago Review* we extract the following notice of it:

> The ladies of the Methodist church furnished something new in the way of an entertainment during the first evening of their fair last week. Eugene Secor, the king bee-man of this locality, offered to them all the honey they could use for one evening, and on the strength of that offer they advertised a Honey Feast. The bill of fare included choice comb honey, extracted honey, both liquid and candied, milk and honey and honey cake, the latter furnished by Mrs. Secor. Hot biscuit were served. The crowd "got away" with a goodly amount of sweets, but we did not hear of anyone being made sick by it, and we are assured that the supply was not exhausted, and that the ladies cleared a nice little sum by the arrangement.

The Cause of Success.—Our readers are well aware that Mr. E. C. Jordan is one of the most successful honey-producers in Virginia. We are in receipt of a copy of the *Times*, of Winchester, Va., in which we find the following notice:

> Mr. E. C. Jordan, of Jordan's White Sulphur Springs, laid on our table, the other day, some copies of the AMERICAN BEE JOURNAM, published in Chicago. It treats fully of everything connected with the production of honey and management of bees, and we should think would be invaluable to those engaged in this pleasant and profitable business. Whether Mr. Jordan has profited by its suggestions or not we are unable to say. but we do know that he is a most successful bee-man and the products of his apiary are not surpassed by any other in the country. His "bee orchard" is a source of no small profit, and his honey is always in demand in the city markets, at the highest price.

The Winchester *News* remarks that Mr. Jordan has been exceedingly successful with his bees, and has shipped large quantities of honey to the large cities in the South, and that it commands large prices, and is eagerly sought after. This shows what energy and improved methods can do, in the development of the markets for honey.

◆

☞ We notice that the Rev. O. Clute, of Iowa City, is to give a lecture on "Bee-Keeping by Modern Methods," on Thursday, Jan. 11, before the Iowa State Agricultural Society and Farmers' Alliance, at Des Moines, Iowa. Mr. Clute is an eloquent speaker, as well as enthusiastic bee-keeper, and it will no doubt be a very interesting lecture.

◆

☞ The eldest son of Dr. N. P. Allen, ex-president of the North American Bee-Keepers' Society, died of typhoid fever, Nov. 29, 1882.

The Small Sections for Honey.

This appears to be the all-absorbing topic of the hour. Several articles appear in this number on the subject, which is being thoroughly discussed on all sides and in all its phases.

Mr. James Heddon, of Dowagiac, Mich., has sent us a nice sample of his new half-pound, dovetailed, white-wood section, described on page 27. It is very handsome in appearance, and, we think, of the right shape: 4¼ inches high, 2 13-16 inches wide, 1½ inches thick. Mr. Heddon advises caution in changing to small sections, and says: "You may be sorry if you do it."

Dr. G. L. Tinker, New Philadelphia, O., also sends us one, 3¾ inches square and 1⅜ inches thick. When filled with honey, the one sent by Dr. Tinker will look the most for the money, but, we fear, the extra capping and comb foundation will make it too expensive to be profitable.

Mr. L. H. Scudder, New Boston, Ill., gives some very strong arguments against decreasing the size of the package, and Dr. C. C. Miller, of Marengo, Ill., inclines to that side of the question. The Doctor very sagely remarks, that if many are going to adopt the half-pound size, the present marked difference in price may not continue.

Messrs. J. C. Newman & Son, Peoria, N. Y., who claim to be the originators of the half-pound sections of honey, describe the difficulties to be surmounted in their first use, and advise caution. They also say that separators are absolutely essential, and that straight combs cannot be produced so as to crate nicely without separators, and find that those made of thin wood are the best.

Dr. E. B. Southwick, Mendon, Mich., makes the following criticism on the size of the small sections. But, whew! He has gone down another notch—to quarter-pounds—*reductio ad absurdum*—perhaps. He says: "Mr. Bingham has given 9¾ cubic inches as the size of one-half pound of honey. That, I think, is correct in extracted, but not in comb. His shaving-down experiment shows that it takes 11¼ cubic inches to make one-half pound, and when we measure the inside of a one-pound section we find it contains about 26¼ cubic inches, thus allowing 3¾ cubic inches for extra, and I think it is needed. As my hive is so arranged that I can use any size of sections, I think, next year, I will try a few 3½x3½x1½, upper side, for one-half pound; and a few 3x3x1¼, upper side, for one-quarter pound. The further we run an absurdity, the sooner we find we are wrong. There is always so much waste room between the comb and sections that I think these sizes none too large."

The Bee Journal would strongly advise caution. Let it be thoroughly discussed, and, then, let a few be tried and, if they will increase the consumption at good-paying prices to the producer, then increase the dose, another year; but do not attempt to glut the market, else it may have the opposite effect.

All sizes will be needed to stock the market, and if the "ten-cent" packages of honey should revolutionize the market, causing ten times the amount to be used, no one could or would complain. Any move that would increase the demand for honey, is in the interest of the producer, and will redound to his advantage.

The Strength of Bees.—The *Norristown Herald* makes the following comparison between the strength of bees and horses:

> Mons. Pateau has discovered that while a horse can pull only six-sevenths of its weight, a bee can pull twenty times its weight. When some one discovers how to grow bees as large as horses, the latter will have to take a back seat. But it would be fatal to fool around the heels of such a bee. With its javelin it could pin a man against the side of the stable. Perhaps it would be better not to raise bees any larger than the present crop.

☞ We regret to learn that Mr. L. H. Scudder, of New Boston, Ill., has been severely injured. He attended the convention at Chicago, last October, and helped to make that meeting very interesting. A few days after that, he returned home, and now writes us as follows: "A few days after reaching home I had the misfortune to have a team run away with me, by which I was so much injured that I have been unable to perform any labor. My right arm was dislocated at the shoulder, besides being badly bruised. My head also received several severe cuts and bruises from the horses' feet. However, I am so far recovered that I feel that I must be doing something." We extend our sympathies to friend Scudder, and hope he will soon *entirely* recover from his injuries.

Mr. Heddon as a Specialist.

The Dowagiac *Republican* in a recent issue, gives a long notice of the apiary of Mr. Heddon, and its growth, year after year. From it we extract the following:

> One of the most important business interests in this city is Heddon's apiary and bee-keepers' supply manufactory. The proprietor, Mr James Heddon, begun bee-keeping as a specialty in 1869 and was the first specialist in Michigan, there being but few in this country at that time. His capital stock did not exceed $500, but the business has increased steadily since, giving him a nice profit, which Mr Heddon has, for the most part, kept in the business. He has owned at one time as many as three apiaries and 550 colonies of bees, having now 400 colonies in his apiary in this city. He has always produced both comb and extracted honey, formerly giving preference to the latter, but of late years producing mostly comb.
>
> The largest yield of honey from one hive, was 410 lbs, during one season. The largest yield from one hive in one day was 29¾ lbs. This was extracted honey, except about 50 pounds of the 410. These figures only show what can be done, with all conditions the most favorable. With so many bees as he now keeps together, in one area (an area, or bee range, consists of a field whose diameter is 6 to 8 miles), the *pro rata* yield is quite small. Where nothing was gathered before, he has gathered together and sold something over $20,000 worth of this produce during the last 13 years.
>
> Mr Heddon has formerly given employment to one or two hands, during 8 months of the year, and now he employs three and four during the summer season, and one all the year around.
>
> This year's crop of honey was some over half comb, the bulk of which was sold to Colter & Co., of Cincinnati, they sending $720 for 4,000 pounds, the price being 18 cts. per lb. here, cash in advance. He still has some 3,000 pounds of extracted honey now on hand (candied solid) which he is keeping to fill orders for regular customers, who depend upon him from year to year, and the home trade.

☞ The time for the usual winter rush of correspondence is here, and we wish to impress upon all our patrons the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ We are sorry to learn that Mr. Paul L. Viallon has lost his little boy—the pet of the household.

☞ Attention is called to our *new* and liberal advertising rates for 1883.

Habits of Bees in the South.

A correspondent of the Washington *Gazette*, who has a very imaginative and fertile brain, tries to explain and account for a foolish story that has been again and again published in the papers all over the country, about bees losing their inclination to store honey, when they are placed in the South where they experience but little of winter. The story, so often told, is as foolish as it is untrue, and the *Gazette* correspondent will try in vain to account for that which is itself untrue, as well as unreasonable. The intelligent bee-keepers will be amused and at the same time disgusted, at the following, which is received as truth by thousands of persons who know nothing more about bees, than that they use their sting as a means of defense, and that the honey they store up is delicious. The item referred to is as follows:

> THE RECKLESS BEE.—An experimenter in Southern agriculture told me the following history of Northern bees in the South. He took a colony of the little gratuitous honeymakers down to Florida. The first year they reveled, throve, and stored honey nearly all the unvaried summer time. But the second year a few of the more reflective bees evidently turned the thing over in their minds thus: "This country has no winter to provide against; what is the use of laying up honey when the flowers blossom all the year round?" These bees exerted enough influence among their friends to keep a good many bees from laying by any sweet merchandise the second year of their exile.
>
> But the prudential instinct so strong in the little insect, prevailed with the majority. They evidently said to themselves: "Perhaps this has been an exceptional year. Next season may bring cold and snow and dearth of flowers." So there was quite a stock of honey laid by on the second year, in spite of a few strikers. But by the third year the conviction had evidently thoroughly penetrated the bee mind that it was foolish to lay up in a land of eternal blossom. They made just enough to last from day to day, abandoned themselves to living from hand to mouth as recklessly as does any tropic-born butterfly.

◆

☞ May we ask you, dear reader, to speak a good word for the BEE JOURNAL to neighbors who keep bees, and send on *at least one new* subscription with your own? Our premium, "Bees and Honey," in cloth, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

Local Convention Directory.

1883. *Time and Place of Meeting.*

Jan. 9-11, Northeastern, at Syracuse, N. Y.
G. W. House, Fayetteville, N. Y.
10, 11.—Indiana State, at Indianapolis.
Dr. J. H. O'Rear, Pres.
11, Nebraska State, at Wahoo, Neb.
Geo. M. Hawley, Sec.
16,—N. W. Ill. and S. W. Wis. at Freeport.
J. Stewart, Sec.
18, Champlain Valley, at Middleburg, Vt.
T. Brookins, Sec.
19, 20.—Mahoning Valley, at Berlin Centre, O.
L. Carson, Pres.
20.—S. W. Mich., at Ann Arbor,
G. J. Pease, Sec., Ann Arbor.
Feb. 3.—Northern Ohio, at Norwalk, O.
8.—Maine State, at Dexter.
Wm. Hoyt, Sec.
14, 15.—N. E. Ohio and N. W. Pa., at Andover
C. T. Leonard, Sec.
April 5.—Utah, at Salt Lake City.
E. Stevenson, Sec.
17, 18,—Texas State, at McKinney.
Wm. R, Howard, Sec.
May 11.—Iowa Central, at Winterset.
J. E. Pryor, Sec.
—, —Texas State Convention, at McKinney.
Dr. W. R. Howard, Sec.
Oct. 17, 18.—Northwestern, at Chicago, Ill.
Thomas G. Newman, Sec.
9, 10.—Northern Migh. at Sheridan, Mich.
O. R. Goodno, Sec., Carson City, Mich.
Dec. 5-6, Michigan State, at Flint.
H. D. Cutting. Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

◆

Convention Notices.

☞ The Northeastern Bee-Keepers' Association will hold their thirteenth Annual Convention in the City Hall, at Syracuse, N. Y., on the 9th, 10th and 11th days of January, 1883.

Business of great value to every bee-keeper in the State will be brought before the meeting. Every member is requested to attend and bring their friends, that all may be benefited by the action there taken.

The question drawer will be opened each day, and questions answered and discussed. All are invited to send questions. Appropriate diplomas will be awarded to successful exhibitors of implements, etc. Let all attend.

GEO. W. HOUSE, *Sec.*

◆

☞ The annual meeting of the Champlain Valley Bee-Keepers' Association will be held at Middleburg, Vt., on Thursday, January 18, 1883, at 10 a. m. T. BROOKINS, *Sec.*

◆

☞ The Nebraska State Bee-Keepers' Association, will hold its annual session in Wahoo, Saunders county, Neb., commencing Thursday, Jan. 11th, 1883. Arrangements have been made with the railroads to secure 1¼ fare for the round trip. The Saunders county Bee-Keepers' Association will furnish entertainment free to all visiting apiarists. Bee-keepers from neighboring States will be welcomed.

T. L. VONDORN, *Pres.*
GEO. M. HAWLEY, *Sec.*

◆

☞ The Southeastern Michigan Bee-Keepers' Association will hold their annual meeting in the courthouse at Ann Arbor, Jan. 20, 1883. All are invited. H. D. CUTTING, *Pres.*
G. J. PEASE, *Sec.*, Ann Arbor.

☞ The Texas State Bee-Keepers' Association will hold its Fifth Annual Convention at McKinney, Collin Co., on Tuesday and Wednesday, April 17th and 18th, 1883; at the residence of Hon. W. H. Andrews.

The following committees have been appointed, and the programme arranged for the next meeting, by the executive committee; viz: on Resolutions; Apiarian Supplies and Exhibits; Subjects for Discussion; and Arrangements, to receive and entertain those in attendance from abroad.

Programme.—President's Address. Subject—State and National Conventions.

Subjects for general discussion:

Essays.—The "Coming Bee," W. H. Andrews. Honey plants, Native Horsemints, different varieties, Wm. R. Howard. "Extracted vs. Comb Honey," W. K. Marshall, D. D. "Bee-Moth," W. H. Andrews. "The Queen Bee, her nature and habits, Wm. R. Howard. "The different races of bees in America; their relative value to apiculture," W. K. Marshall, D. D.

Other essays are promised, and a general good time is anticipated. Ample arrangements are made to accommodate those from a distance. Those wishing to place anything on exhibition or correspond with the committee of arrangements, will be promptly attended to, by addressing, W. H. Andrews, President, McKinney, Collin Co ,Texas. All other correspondence to the Secretary. We would be pleased to have any one propound questions of interest for discussion, as we have found great interest, as well as valuable information gained by the discussion of questions contributed to our "Question Box."

WM. R. HOWARD, *Sec.*
Kingston, Texas.

◆

☞ The Northeastern Ohio and Northwestern Pennsylvania Bee-Keepers' Association will meet at Andover, Ohio, to hold their annual convention, on the second Wednesday and Thursday of February, 1883.

C. T. LEONARD, *Sec.*

◆

☞ The annual meeting of the Mahoning Valley Bee-Keepers' Association will be held at Berlin Center, Mahoning Co., O., in the Town Hall on Friday and Saturday the 19th and 20th of January, 1883. All bee-keepers are invited to attend and send essays, papers, implements, or any thing of interest to the fraternity. A full attendance is requested of all who are interested. In fact, the meetings will be so interesting that you cannot afford to miss them. We expect a lecturer from abroad on the evening of the 19th. L. CARSON, *Pres.*

◆

☞ The annual meeting of the Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association will be held in Temperance Hall, Freeport, Stephenson county, Ill., on January 16 and 17, 1883.

JONATHAN STEWART, *Sec.*
Rock City, Ill.

CORRESPONDENCE.

For the American Bee Journal.

Half-Pound Sections and Supers.

DR. C. C. MILLER, 174-202.

So many different things have been said and planned about half-pound sections, that I am not surprised that my opinion is erroneously stated in the Bee Journal, page 802. It is there stated that I think "about 10 to a Langstroth broad frame will be about right in size." Instead of that it should be "10 to the foot" of 4¼x4¼ sections, that is, to hold a half-pound, the section could be 4¼x4¼, and, so that in width, 10 sections would just measure a foot. This would make the section about one-sixteenth of an inch wider than Mr. Bingham calculates them. Very likely I expressed myself so bunglingly as to be misunderstood. But are we getting at the matter of size in the right way? If some one has used them, and found upon trial that a certain-sized section contains just one-half a pound, that is better than the figuring of a whole convention. If, however, no one has used 4¼x4¼ sections, we can figure on the width to approximate the matter, and settle it finally only when we have referred the matter to the bees for actual test.

Although I may try half-pounds, I, for one, am by no means ready to adopt them, at least until I know more about them by actual use. Mr. Bingham, on page 802 of the Bee Journal for Dec. 20, has ably given the advantages and disadvantages, but I think I see a possibility of some disadvantages not mentioned.

To begin with, most of us, or at least some of us, would have to go to considerable expense to get new broad frames if the 4¼x4¼ size is used, for, the width being different, I should about as soon make new frames as to alter the ones that had been used for 1 or 2-pound sections.

If used without separators, the thickness of the comb might suit the queen so well that I can imagine such a thing as the whole brood-nest moved up into the super.

At present quotations we should be warranted in taking some trouble to change, but will there be any such permanent difference in price between pounds and half-pounds if anything like an equal amount of each is on the market?

Perhaps not one half-pound section was used this year for every thousand of one-pounds. Suppose the case reversed, and that a thousand half-pounds were put on the market for every one-pound, would not the one-pound section bring a higher price than the half-pound on account of its scarcity? There will probably always be a large class of customers who will think a thick piece of comb honey presents a finer appearance than a thin one, and I suspect very few think otherwise.

To return to the subject of change of fixtures; there will be no change needed where the

HEDDON SYSTEM OF SUPERS

is used. In a private letter Mr. L. H. Scudder, New Boston, Ill., objects to Mr. Heddon's somewhat, saying, 1st, "I have little faith in being able to produce straight combs without separators." 2d, "If 4¼x4¼x2 inches holds one pound of honey, will not a comb ¼ inches thinner be too light to suit all honest dealers?" I am pretty fully in accord with Mr. Scudder in his first objection, and yet Mr. Heddon does get straight combs. Whether he could succeed in my locality, or whether *I* could succeed in *any* locality, is an open question. With regard to the second objection, a section without separators must necessarily be thinner than one with, else it would be too heavy, and I am not sure that one-fourth inch is too much difference. But even if the section weighs less than a pound no honest dealer will object to that, providing he gets pay for just the weight he sells, and most of the dealers I know anything about sell in that way, and every one ought to. I have never been able to raise one-pound sections so uniform in size that they ought to be sold by the piece without weighing, for there is a variation, from lightest to heaviest, from one-fourth to one-half a pound in weight. The coming season I expect to try a few supers on Mr. Heddon's plan, and can then tell a little more about it.

Marengo, Ill., Dec. 22, 1882.

For the American Bee Journal.

The Blessed Bees Criticized.

JAMES HEDDON.

A New York visitor and bee-keeper, accidentally left a copy of a book having the above title on my table. Before sending it to him I obtained his permission to read it. I had heard several names mentioned as the author, or alias of "John Allen." I had been persuaded to believe firmly in the authorship of one of them. Since reading it I do not believe the one whom I had supposed did write the book.

I am now all at sea in regard to the matter. Say what I may, I can criticise none but the fictitious "John Allen." For the sake of what I believe to be important truths relative to our business, I will say what I am forced to believe. There is no sin in an unbiased opinion. There is no sin in publishing it where the motive is to benefit the class who read it. There is no cruel bitterness toward any individual, as I do not know who wrote the book.

The evident intent of the work is to add to other influences calculated to induce an influx into honey-producing, that of the fascination of the novel. If the author had, for his inspiring motive, that of assisting good and needy, but mentally and physically enfeebled or otherwise unfortunate people, by inducing them to embark in what he considered so lucrative a business; that these otherwise possibly unsuccessful ones might succeed in securing to themselves the means of obtaining that higher mental, moral and physical culture that the good, the true and the noble so justly and wisely prize, then he has my most sacred friendship and sympathy. If, on the other hand, he is endeavoring merely to augment the income of the middlemen connected with our business (a thing which he is doing), he deserves the censure of every bee-keeper, as well as every good human being.

My own opinion is fully settled upon that point. I believe, from the tone and expression of the book, that the motives are good, and John Allen can rightfully be classed among the mistaken.

My experience as a honey-producer, together with the valuable lessons I have learned of others (nearly all in private conversation), forces me to believe, and my love of truth induces me to say, that it is my sincere conviction that the methods laid down are in exact opposition to the results given in the book entitled "Blessed Bees."

That this book is not only, like all other books, hardly ink-dried, until it is away behind the times, so fast does the practical part of our science progress; but it was not up with the times in which it was printed. That its author was not a practical honey-producer; that he drew largely from the writings of others and from their mistakes.

Referring to capacity, we have three classes of bee-keepers. The first and largest class are those who have from the least to the greatest amount of practical capacity, but no ability to convey their knowledge to others through the medium of ink. Then those who possess both, in moderate or extreme degree. Then those who have, in an eminent degree, the ability to tell four times as much as they think, and ten times as much as the experienced will believe, who have but very little practical dollar-and-cent knowledge of the subjects upon which they write. The more experienced always catch a gleam, if not a flood of light, revealing the true state of affairs in every sentence. This class write, but the younger practitioners, which make up our brotherhood, are of necessity led round about in circles by them, paying toll at every quarter pole.

To go on and show the whys and wherefores that connect the system of practice therein laid down, with certain failure, would require more space than we should occupy, and more time than we can afford to devote, and even to name them would double this already too long article.

The errors are: Returning Crates, Fall Breeding to Winter, Dry Cellars, Bees in the Fall and Spring at Same Price, Black Bees $5 and Italians $10 to $20, High Prices of Certain Supplies, Best Honey Made by Italian Bees, Conditions of Successful Feeding Back, Taking out One and Feeding Back Another Kind of Honey to Winter On, etc., to the letter box department.

It is not my province to contradict the large reports gathered together through several years and from all portions of the United States, and placed under the head of Notes, for none are more willing to admit the great possibilities of bees than am I, but attention should be called to the fact that these reports are uncommon, that they are nearly always from few colonies, excluding the possibility of coupling them with a future millionaired condition for John Allen or any of us, and that the Grimms and Harbisons are not only so scarce that we quote them 15 years apiece, but the possibilities of Southern California, coupled with the experience of an old specialist, are not the probabilities of John Allen's three months of theory, and a bee book, in the pineries of Northern Michigan.

We know that there are occasionally men who can get large and larger yields of honey from hundreds of colonies, thus putting their thousands of dollars' worth of honey into the market nearly every year, but these producers use methods never dreamed of in the philosophy of John Allen.

But the old adage, that there is "no roses without thorns," is not only true, but the reverse is also a fact, that there are roses among thorns, as this little book gives us evidence.

At the close of the work, on page 155, blossoms a rose whose name is *truth*. Though not beautiful to the sight of some beginners, some who have gone in on the plan of "bees work for nothing and board themselves," its sweet fragrance meets the nerves of every old practitioner, laden with memories of the happy past. I quote: * "So every person, who expects to get rich quickly by keeping a few bees, will fail. Money can be made only by thorough acquaintance with the business, and by careful, persistent work from year to year. But, in spite of what I say, some will get bitten by beginning bee-keeping without due preparation, and with false expectations. When you do get bitten please remember that 'I told you so.'"

Let us hope that the primary principles laid down in this book, when learned by the reader, will, in part, compensate for the errors in the general management, which he will soon have to unlearn, if he does not quit the business, broken in heart and broken in pocket.

Dowagiac, Mich., Jan. 1, 1883.

For the American Bee Journal.

Md., Va. and W. Va. Convention.

The first annual meeting of the Union Bee-Keepers' Association of Maryland, Virginia and West Virginia, was held at Hagerstown, Md., Oct. 18 and 19, 1882. The meeting was called to order with President D. A. Pike in the chair, and J. Luther Bowers, Secretary. Thomas Foster was asked to assist the secretary. As the Association was not yet permanently organized the secretary had nothing to report.

The standing committee on constitution and by-laws reported, through the secretary, the constitution and by-laws furnished by the AMERICAN BEE JOURNAL, which were approved by the committee and adopted by the Association.

The president's address was read by the secretary. In eloquent words our worthy president welcomed the bee-keepers of the three States to our Association, asking them to join with us in our discussions.

The members being slow to proceed to business, Wm. M. Bowers, of Illinois, said he was in the county and so came to the meeting; he was sorry to see the friends so backward and hoped they would take an interest. His remarks had the desired effect.

The election of officers resulted as follows: Wm. Anderson, of Harper's Ferry, W. Va., moved that the same officers hold over. Carried. President, D. A. Pike, Smithsburg, Md.; Secretary, J. Luther Bowers, Berryville, Va.; Treasurer, S. Valentine, Hagerstown, Md.; Vice Presidents, Thomas Foster, Cumberland, Md., Wm. Anderson, Harper's Ferry, W. Va., E. C. Jordan, Stephenson Depot, Va.

C. M. Hicks, of Fairview, Md., read an essay on transferring bees. On motion, he was given a vote of thanks for his address. After discussing the subject, the meeting adjourned until 7 o'clock, p. m.

Met at 7 p. m.; Vice President Wm. Anderson in the chair. Ten new members were added to the Association.

S. Valentine said that he aimed to have his queen-rearing colonies as strong as possible before commencing business, not giving any special method.

C. H. Lake, of Baltimore, asked if a queen that had been balled was of any account afterwards?

S. Valentine had seen queens that had been balled that did well afterwards. The general opinion was that a queen balled in a friendly way was seldom hurt, while if balled in an unfriendly, she seldom, if ever, amounted to much.

J. Luther Bowers asked if the Albino bee was not a freak of nature, or, in other words, would she reproduce bees of the same marking, one generation after another.

S. Valentine made a specialty of Albino queen rearing and said that they were a distinct race.

C. H. Lake said he thought they were a freak of nature, and said he had an imported queen on exhibition at the Fair, that produced a greater part of her workers of the so-called Albinos; thus proving that they were not of American origin.

Those taking an active part in these discussions were: Thomas Foster, Cumberland, Md.; Jacob Ebersole, Martinsburg, W. Va.; W. R. Young, Myersville, Md.; Wm. Anderson, Harper's Ferry, W. Va.; S. Valentine, Hagerstown, Md., late of Double Pipe Creek; C. H. Lake, Baltimore, Md.; Wm. M. Strnder, Millwood, Va.

Chas. H. Lake invited the Association to meet at his tent on the fair grounds.

Adjourned to meet at Mr. Lake's tent, at 10 o'clock a. m. to-morrow.

Thursday, Oct. 19, 10 o'clock a. m. After examining the many exhibits of bee-fixings and bees, the Association was called to order. There being no further business before the Association, Hagerstown, Md., was selected for the next meeting.

It was moved to adjourn to meet at Hagerstown some time next summer; the secretary to notify members, and also to publish these minutes in several of the bee papers. Carried.

J. LUTHER BOWERS, *Sec.*

For the American Bee Journal.

A Standard Frame.

JAMES B. MASON.

The cry comes, from Maine to California, for a standard frame. Bee-keepers are beginning to awake to the fact that it is one of the most essential points, for the advancement of bee-culture, that we have a standard frame, and a standard section-box. The latter we have secured in the 4¼x4¼ section, but as to a frame we are, as yet, "terribly mixed," and I believe, until we settle on a standard frame, we shall not make any very decided advance in bee-culture. Ever since Mr. Langstroth gave us the movable frame, the country has been flooded with patent hives, containing frames of different sizes; the inventors claiming great advantages thereby; but, on the whole, has any great advantage resulted from the use of the different sizes, over the regular Langstroth frame? It seems, that in the past twenty years, if there had been, we should have seen them, and if there has not been any, why will bee-keepers persist in using odd-sized frames?

G. M. Doolittle, one of the most successful bee-keepers, uses the Gallup frame; D. A. Jones uses the American frame; James Heddon uses the Langstroth frame; L. C. Root uses the Quinby, the largest of all. These men all appear to be equally successful, and I believe would be the same if they all used the Langstroth frame. It is my firm conviction that every invention that has been brought before the public, that has changed the size of frame, since the introduction of the Langstroth hive has been been a detriment to the progress of bee-culture.

Mr. Heddon did not claim but that there were other frames, in and of themselves, as good as the Langstroth, but he thinks the Langstroth is as good as any, and believes it to be "the coming frame" and changed our 50 hives so as to fall into the beaten track, and use a standard frame, and he thinks he made money by it. When bee-keeper are willing to follow his example and give up their pet notions, then bee-culture will advance rapidly.

How is the adoption of a standard frame for America to be brought about? I do not know just how it can be done, but will advance a few thoughts, and leave the subject for more able hands. The able correspondents should write more on the subject through our bee papers; conventions should canvass the matter and resolve to accept some size of frame as a standard, and their influence will go a long way toward establishing a standard frame. Supply dealers should stop advertising to manufacture all sizes of fixtures, and thereby save themselves trouble, and their customers money. I would not be understood to discourage invention, let us have all the improvements in our hives possible; then if they can be improved, all we shall have to do is to lift out our frames and hang them in the improved hives. Carriage makers would not think, for a moment, of changing the width of carriages in their new styles, nor should hive manufacturers change from the standard size.

Mechanic Falls, Me., Dec. 19, 1882.

Read at Eastern N. Y. Convention.

Honey as a Staple Product.

A. J. KING.

Mr. President: The subject assigned me by your committee, is one of vast importance, and I cannot but regret the limited time I can give to its consideration. It is the question which has been propounded to the promoters of all other industries in their incipient stages. When the bill was passed in Congress to establish the first line of telegraph, requiring an appropriation of $30,000, it was argued by many, even allowing the thing would work, so few would make use of it that years would elapse before it would pay for the appropriation. The thousands of miles of telegraph and telephones all over the world, all paying handsomely, attest the folly of such suppositions. When the elevated railroads of New York city were first talked of, it was thought by many that it would be so much capital sunk, for, nobody, but a few "dare-devils" would ever risk their lives by riding on them. To-day they are over-crowded with men, women and children gliding along at lightning speed, as unconcerned as if in their own parlors at home, and these roads are paying institutions

About twenty-five years ago, when the grape question was up for discussion and vineyards were springing up in many parts of the country, the "wise acres" prophecied an over-stocked market and a general collapse of the entire business. The "collapse" never came, but the grape crop of the country has increased since that time a thousand fold, and is to-day one of the recognized industries of leading importance in a large part of our country.

So we might go on, until we had outlined the history of nearly every business depended on for a livelihood. We should see them in their small beginnings, gradually expanding, passing their experimental phases, and finally attaining the rank of "necessities." This gradual development seems to be necessary in art, science, mechanical inventions, or in new articles of food, in order to educate the masses to receive them.

Within the last fifteen years the production of honey in the United States has increased ten fold, or, in other words, from ten millions to about 100 millions of pounds, and yet the average prices paid for it have not diminished, and why? simply because the people have been educated to its use. Through the influence of conventions, honey exhibitions at fairs, bee books, bee journals, etc., the masses are beginning to realize that honey is the most healthful of all the sweets; that when properly used it surpasses all others in preserving and adding to the delicate flavor of all fruits; that in the preparation of medicines it has no equal. The baker and brewer also are beginning to use extracted honey, where formerly they used sugar and glucose, but the greatest and best use to which it is put is on our tables, where, in many instances, it is taking the place of the different brands of syrups.

The subject has been so widely discussed that all the agricultural papers of any value have found it necessary to devote space to this subject. Many bee-keepers who, a few years ago, had no home demand, now find it necessary to reserve several thousand pounds for this purpose.

With all these influences at work, there is yet probably not one person in ten, especially in our cities, in which honey forms any part of his diet, not because he does not or would not like it, but simply from the fact, that either the information of its merits above other sweets has not yet reached his ears, or he is yet ignorant of the channels through which he may procure a pure article at a reasonable price. The great bulk of our honey is sent to the cities, consigned to a few houses, who do not retail or take any pains to let the masses know that they keep honey for sale; but, instead, they sell it to grocers who retail it at prices which make it cost the consumer fully double the amount which the producer receives for the same honey. Honey, at such prices, must be classed among the luxuries, to be indulged in only occasionally, except by the wealthy.

Again, some large producers, by the offer of cash down or small advance above regular prices, will sell to those who they have every reason to believe will use it to give flavor to double the quantity of glucose to be palmed off as "choice new honey," thus vastly increasing the volume, but correspondingly reducing the price and degrading the merits of the pure article, greatly to the disadvantage of the producer and to the detriment of the industry. Of course, the unscrupulous mixer can well afford to greatly undersell all honest dealers, as two-thirds of his mixture costs him only about three cents per pound. Were this abominable practice to be permitted to continue, the production of honey would be indeed a precarious business, but, thanks to the good sense of our people, by the aid of our conventions and numerous publications on bees and honey, assisted by the press of the entire country, the alarm has been sounded, and laws have been and are being passed against the crime of adulterating food products, which are even now producing the most salutary results. The great factories recently erected for the production of grape sugar and glucose have many of them shut down and all are in a fair way of collapsing at no distant day, through the influence of further legislation on the subject.

Now, I fully believe that with this enemy disposed of, extracted honey, averaging the grades, can be made to net the producer ten cents per pound; and comb honey about fifteen cents per pound, and I as fully believe that, with our present knowledge and appliances, honey may be produced with fair profit at these prices. I speak more confidently with reference to extracted honey which will, in all probability, be the main supply for the future. Now this honey ought to reach the real consumer, after all freights and commissions are settled, at an advance of not over five cents per pound, or 15 cents for extracted and 20 cents for comb honey.

If the consumer and producer can be brought as nearly together as here indicated, and still more vigor be used in acquainting the public with the merits of honey, there will be practically no limit to the sales which may be made. It is estimated that if the amount of sugar and syrup annually consumed in the United States could be equally divided among all the inhabitants, each would receive between thirty and forty pounds. Now, suppose that each individual should consume but ten pounds of honey, and we have the enormous amount of 500,000,000 pounds at once disposed of, or nearly five times the present population. Add to this the increasing demand for extracted honey for manufacturing purposes, and the continually widening and ever extending demand for American honey in foreign countries, and the outlook for bee-keepers becomes pleasing to contemplate.

Another use to which honey has been recently put, bids fair to greatly increase the demand for it. I refer to the experiments of C. J. Quinby Esq., of White Plains, N. Y. He has, during the past three years, produced a wine in considerable quantities, rivaling in fine and delicate flavor the best imported brands, and used nothing in its production but pure honey, of any variety. Very little of his wine has been kept over eighteen months, for the reason that the demand is greatly in advance of the supply. He sells it for communion services and medical use, as the best physicians in his town recommend it. We do not refer to this because we favor the wine industry (for we aim to be temperate in all things) but only to show what will, in all probability, at no distant day, consume a large quantity of our surplus extracted honey, especially the darker varieties. What would be the state of the grape market to-day if the production of wine should suddenly cease? Now, assuming that wine made from honey is as good as that made from grapes, that one gallon of honey will produce at least two gallons of wine, worth at the very lowest estimate, $1.25 per gallon, it is easily seen that the manufacturer can use 10 cent honey and yet make a large percentage on his investment.

Thus we have endeavored to give some of our reasons for believing that extracted honey, at least, will become a staple article in our markets, so soon as the supply may be relied upon to answer all the demands which will be made upon it, and this rests entirely with the producer. Comb honey will likely continue a luxury, as long as producers treat it as such, by reducing the sensible one-and-a-half and two-pound boxes down to those containing a mere mouthful.

New York, Jan. 1883.

* * *

For the American Bee Journal.

Wood Separators for Small Sections.

J. C. NEWMAN & SON.

Having read with much interest the proceedings of the Michigan State Convention, and also the article on page 802 of the BEE JOURNAL, we will state something of our experience in the use of small packages for comb honey.

In the season of 1878 we decided to use small sections for honey, the size being, if we remember rightly, 3½x3½x1¾, and without separators. The sections were filled complete with foundation and we supposed we were sure of having them all very perfectly filled, but, on taking them from the hives, the very opposite was the case. The worst of all was the difficulty of putting into the crates; but, after much patience, it was completed, and shipped to Thurber & Co., of New York, with very good results.

It took but one season to decide that it was *utterly impossible* to produce a fancy article of comb honey without the use of separators, even with small sections and the use of comb foundation. After the above experience we decided to adopt a very different plan, which was as follows: To change the size of package and use them on the same section racks that we used for other sizes; which would necessitate a size 3x3½x2 to hold exactly one-half pound, and right here we will say that we have put up many hundred crates of fifty sections, weighing from 24 to 26 pounds.

We use separators of very thin wood, and we are very particular to take the honey from the hives as soon as finished, for the bees will soil the small packages very quickly.

In the season of 1880 we produced about 6,000 of the half-pound sections of honey, and made a sample shipment to Voigt, Mahood & Co., of Pittsburgh, with returns at $6.75 per case, and an order for all we had, at the same price, stating that it was the neatest article of the kind that had ever been placed on their market. The past season we made a sample shipment to Crocker & Blake, of Boston, with returns at $7 per case, and saying it was the finest of anything they had ever had.

The only objections to Mr. Bingham's 4¼x4¼ would be the extra expense of foundation, and the combs being so very thin. Would the bees work out the wax as well, or would they leave the (so-called) fish bone in the center? And, also, would not the time occupied by the bees in capping so large a surface, for so little honey, be a more serious objection?

After an experience of four years with the half-pound sections, and for the benefit of those who are about to begin their use, we will say that the coming season we shall again change our package, which will be 3¼x4x1½ for the following reasons: It would give a better-sized comb for cutting up, and the combs, being thinner, the bees would fill out better around the outside, next to the wood.

Unless properly adjusted to the hive, and very particular attention is given, the yield per colony, will be very much less than if larger-sized packages were used. If any of the brother bee-keepers used half-pound sections before 1878, let him report through the columns of your *very* valuable BEE JOURNAL.

Peoria, N. Y., Jan. 1, 1883.

* * *

For the American Bee Journal.

Bee-Keeping in Nebraska.

WM. STOLLEY.

I started "Apiculture" here, 150 miles west of the Big Muddy (Missouri River), three years ago, with but two rather weak colonies of black bees, without having at that time the slightest knowledge of them. As was to be expected, under such circumstances, I blundered in my first summer's management, viz.: increasing from 2 very weak, to 3 still weaker colonies in the fall, but with very little honey for winter stores.

Then I got hold of the excellent BEE JOURNAL and found how far I was missing the mark. But, following strictly its teachings, I succeeded in providing, in time, my bees with the required winter stores, by feeding night and day with coffee A sugar syrup; and, in the spring of 1881, I found to my great satisfaction that every colony was alive, although seriously afflicted with dysentery, and two of the old queens dead. So I commenced the season of 1881 with 6 colonies, and, aided by the use of comb foundation, I increased to 14 colonies that season, and obtained 230 pounds of extracted surplus honey.

Meanwhile, I procured, of Rev. A. Salisbury, 4 tested queens, three of them Italians and one pure Cyprian; all of them were properly introduced before cold weather set in, in 1881. Only 2 of these queens proved suitable for breeders; and, in particular, the Cyprian queen outstripped all the rest. She proved to be, not only exceedingly prolific, but her worker bees are also amiable and the best honey gatherers. From these 2 queens I have reared 20 queens in 1882, of which 17 are Cyprians and but 3 Italians, allowing no drones to be reared in my little apiary but in the Italian colony; hence, all my Cyprian queens were mated with Italian drones.

The spring of 1882 found me as the owner of 12 good colonies of bees, viz.; 1 Cyprian, 1 Italian, and 10 black and hybrids; since 2 colonies had lost their queens during winter, and I had to unite the queenless ones with other colonies.

With the aid of 4 additional Italian queens bought, one from G. M. Doolittle, one from Chas. Dadant & Son. and two from Scovell & Anderson, the aid of 70 lbs. of foundation, and the pasturage of one acre of melilot clover, I increased to 38 strong colonies in the fall, and obtained 520 lbs. of extracted, and 80 lbs. of comb honey, in 2-pound sections, which I readily sold at 25c. per pound.

Towards the close of the season I lost my Doolittle queen, after I had reared 4 queens from her. I also reared 4 queens from the Dadant, and 2 from the Scoville & Anderson queen. I have superseded all my black and hybrid queens, except 3, which proved to be the best of that race of bees, as I desire to winter them once more, and compare results next spring.

About the middle of October I finished packing my bees (inside the hives) with woolen blankets and chaff, and about the middle of November I moved them back to the rear wall of my bee-house, and packed them in prairie hay, sheltered the entrance with slanting boards, and then covered the whole 2 feet thick with prairie hay. On December 17 my bees had their last flight, and I hope that they will pull through the winter all right.

Whether bee-keeping can be carried on successfully, in this, the so-called "Desert of America," I consider *practically solved*. At least, *I* have got the requisite confidence to persevere, and my little success has already inspired others, who will try their hand at it during the coming season.

I have partly sold, and partly ordered 12 colonies at from $12 to $15 per colony, the risk of wintering to rest with the purchaser, and, with the proceeds, I propose to build a honey-house in addition to my bee-house, 80 feet long.

Our lands are cheap, and melilot, matrimony vines and borage will always do well with us, hence, what should hinder us from becoming successful apiculturists? I now have 1½ acre of matrimony vines well established, which will feed my bees from early spring till frost. Near me, are about 20 acres of melilot (*Melilotus Alba*) which are entirely devoted to bee pasturage and also 1 acre of borage.

We are preparing another bee-farm on a larger scale, on the Loop River, where 50 acres or more will be sown with melilot, and as many acres with matrimony vines as can be grown with plants obtainable; and as soon as ready, we propose to put the bees there, and do not care much about white clover, basswood, etc.

I predict that "the Desert of America," will count big, in the near future, as a honey-producing section of this land of plenty, and the AMERICAN

BEE JOURNAL will count its subscribers from the "far West" by hundreds. I will send you the names of parties who become practically interested in apiculture as fast as the nucleus apiaries originate here.

Grand Island, Neb., Dec. 28, 1882.

For the American Bee Journal.

The Folly of Too Small a Section.

L. H. SCUDDER.

I have read with care the remarks of Mr. T. F. Bingham, the editor, and others, on page 802 of the BEE JOURNAL, and will try and give you some of the reasons why I think we, as honey-producers, should not advocate the use of a continually decreasing size of package for honey. In the first place, neither dealer or consumer would require us to go below a one-pound section, if we did not induce them to by placing it before them; but we, in our anxiety to outstrip our neighbor in the production of an article which will appear nicer and, by that means, sell more rapidly and for a shade higher price, continue to reduce the size of sections until (if this folly is continued) honey cannot be produced with sufficient profit to justify a person of ordinary intelligence in engaging in the business.

We know from experience that honey consumers will not be willing to pay a high price, because of the novelty of the package. What was more attractive in appearance than the glassed section, and still, how short-lived it was? Glass at 25 to 30 cents per pound was more expensive food than consumers could afford; and buying wood at similar prices will become burdensome when we get to using about as much wood for one-half or one-quarter of a pound of honey as we are now using for one pound.

I cannot view it in any other light, than that honey-producers are working against their own interests, in advocating the use of a smaller package. Let me give you a few reasons why I think so.

1st. We must discard all our material left over from last year, which to some of us is a considerable item.

2nd. Make new supers, which means money, whatever style we see fit to adopt.

3d. Double or quadruple our expenses for comb foundation.

4th. Compel the bees to use double the amount of material for capping, and requiring additional time to perform the labor.

5th. Doubling or quadrupling the labor in the manipulation of the sections from the preparation to the final packing for market.

Is it not clear that this additional labor will compel many of us to carry a decreased number of colonies? I see no other way, for the very important reason that competent help cannot be obtained; at least, that is the case in my locality, and I presume it is so in many others.

Now, taking this view of the case, how are we, as bee-keepers, to manage to win bread for our families? Some times, for years in succession, the crop will be light, and our profits small, barely sufficient to maintain our families; then, perhaps, a perfect deluge of nectar will come, every shrub and flower bending beneath its weight, and as our busy little workers come rushing home, laden to their utmost capacity with their precious freight, would it not be interesting to watch us "Progressive Apiarists" undertake to measure and store away the fruits of their labor in half-pound sections.

Truly, the prospect is not flattering; it seems to me that it would be a hopeless task, and I, for one, cannot see my way clear to undertake it. Call this "croaking" of an old fogy, if you see fit; I care but little; if the business ceases to be profitable, dearly as I love it, I will turn my hand to something else.

New Boston, Ill., Jan. 1, 1883.

Read before the Maine Convention.

Bee-Keeping for Ladies.

ISAAC F. PLUMMER.

I have thought perhaps it would not be out of place to give you a few thoughts on bee-keeping as an employment for ladies; as I know there are a number of ladies in our State who are interested in bee-keeping, and I have often thought that bee-culture and its benefits have never been properly or fully presented to ladies as a light and profitable employment.

The subject of bees and flowers is so inexhaustible, so full of interest, indispensible to each other, and each so well adapted to the care and cultivation by ladies, that a few hints on this interesting subject may lead to others still greater.

Bee-culture, like all sciences, is full of opportunities for research, and I think, even more interesting; and, in fact, there is a certain mystery about the habits of bees that forever keeps the imagination waiting for some new discovery or development.

The great drawback to bee-keeping has been stings, but modern improvements in bee-culture, such as bee-veils, gloves and bee-smokers properly used should be sufficient to forever dispel every fear even of the most timid.

Bees have been spoken of from the earliest history of the world, and we often see them alluded to in the Bible, and bees and honey in those days were spoken of as possessing wonderful virtues. Some of the greatest writers in the history of our world mention the honey bee as being a gift of the gods, and so I am led to believe that many a silent lesson in the economy of the world has been learned from the wonderful bee. We never forget that sweet and simple song:

> "How doth the little busy bee
> Improve each shining hour."

It teaches us that the sweets of this life are offered to us all as freely as the sweets of the flowery kingdom to the virtuous and industrious bee. If we but imitate these virtuous habits our coffers will overflow with the sweets of life. In fact, the whole study and practice of bee-culture is refining, ennobling and elevating.

Ladies are certainly adapted to bee-keeping, because, as a general rule, they love and cultivate flowers, the very perfection of virtue and inspiration; and bees and flowers seem inseparable. Where flowers are, bees are; even in the deserts where the foot of man has never trod. In the cliffs, on the hills, and in the valleys may be found the industrious little bee, sipping the sweets from the many flower that are

> "born to blush unseen,
> And waste their sweetness on the desert air."

What a wonderful mission these little workers seem to perform while gathering honey, which the Bible declares is "sweet to the soul, and health to the bones." They spread from flower to flower the germs of life of the sweetest things of earth's broad bosom. Let us provide abundant forage for our bees, fill our gardens full of flowers and thus invite them to come and taste of the nectar which the flowers produce within our bowers. I would not advise all ladies to keep bees; but to those who have time, inclination, and wish all the benefits, including the profits of bee-keeping, I say, try a few colonies. Give them the same care and attention you give flowers, and I am sure the results will exceed your most sanguine expectations. Some of the smartest bee-keepers we have in this country are ladies, and I see no reason why the ladies of Maine cannot be as successful in this branch of business as ladies are in other States.

SELECTIONS FROM OUR LETTER BOX

Smartweed and Hearts-ease.

The past season has been the best of the past four years with us. My bees gathered pollen from the hazel nut, and, perhaps, from soft maple as early as February. During April and May bees could do but little, on account of cold and wet weather. I fed mine; had I not, many of them would have starved. The principal flow of honey in Southeastern Nebraska was from the smartweed or hearts-ease, of which there is an abundance growing up among the corn after the farmer has finished cultivating it; also growing thick on wheat and oat stubble, after harvest, or by the way side, everywhere, nearly, except on the prairie. There are several varieties of this weed which yield an abundance of honey superior in flavor to the well-known basswood. I have both kind, and most of my customers prefer the hearts-ease honey. This plant blooms from the 1st of August till frost. My bees commenced swarming in August, and continued to swarm until late in September. One swarm of Cyprian bees came out the last of August. I hived them in the Oatman Modest Hive, gave them 1 frame of brood and the remainder of foundation. I put on surplus boxes, and closed the hive. This swarm gave me about 30 lbs. of comb honey, besides building out and filling the brood-chamber completely. Cyprian bees color their combs more than the German bees. I think they work over all the old comb they can find; besides, they are not careful about the quality of propolis they use. One colony used black paint from barbed wire fences, and their combs were as black as pitch, and had the odor of coal tar. P. BOLINGER.

Salem, Neb., Dec. 22, 1882.

An Average of 57 Pounds per Colony.

It has been a very hard season here for bees, a year ago this fall I packed 29 colonies in sawdust, with chaff over the frames; when spring came they were all alive, but one was queenless, which was united with another weak colony. I succeeded in bringing the 28 colonies through the cold, late spring by feeding a little over 100 lbs. of coffee A sugar. My increase was from 28 to 44, mostly by natural swarming. I also had two swarms leave for parts unknown. I took from them 850 lbs. of comb and 750 lbs. of extracted honey, which gives an average of a little over 57 lbs. for each colony in the spring. My honey was sold here in Scranton, the comb for 16 cts. per lb. and the extracted for 14 cts.

C. E. MILLER.

Industry, Pa., Dec. 20, 1882.

Paste for Honey Labels.

Please state, through the BEE JOURNAL, how to make mucilage or paste that will hold labels on new tin. I have tried a mucilage of gum arabic, but it is not a success.

WM. ROBERTS.

Vaughansville, Ohio.

[This question has been overlooked for some time; we will now answer it. Mr. C. Haucke, of Kentucky, gives the following, which he avers will be successful: "Make a thin batter of best buckwheat flour, stir this in boiling water, on a slow fire; when cooked, or thick, take it from over the fire, and, to each quart, stir in 2 oz. of New Orleans sugar or molasses, while hot. Keep in a cool place. This paste will stick as well to a non-porous surface as to a porous one.—ED.]

Last Season was the Best in 5 Years.

The season of 1882, after fruit blossoms came out, was the best for the past 5 years, for bee-keeping, in this locality. Bees commenced swarming and gave one swarm each all round, during fruit bloom, which was the most profuse bloom ever seen in this section of the country. After fruit blossoms had gone, white clover came out in great abundance, yielding well. I obtained, on an average, 40 lbs. per colony of comb honey, in 1-pound sections, from white clover; and 20 lbs. per colony in 1-pound sections from basswood; making 60 lbs. per colony of white honey in the comb. The fall yield was equally as good; my colonies storing 40 lbs. each, from buckwheat and goldenrod. I notice that some apiarists think buckwheat a poor honey plant; my experience is that it is one of the best honey plants we have. Last fall there was a field of buckwheat about a quarter of a mile from my apiary, the road being between the field and the apiary. I have repeatedly had people stop and tell me that the bees were swarming, such a roaring they made going to and fro from the buckwheat field. My bees are now all packed on the plan given by Mr. Heddon, except 12 colonies which I put in the cellar, for an experiment, having generally wintered on the summer stands. I think either Mr Heddon's or Mr. Doolittle's writings are worth twice the subscription price of the BEE JOURNAL to any one keeping bees. E. W. WALES.

Disco, Mich.

Receipts for Cooking Green and Dried Fruits.

Please publish the following receipts and add to the pamphlet on "Honey as Food and Medicine."

GREEN FRUIT.—If mellow, use only extracted honey, it being the only liquid, it holds the fruit firm and gives a very rich flavor, sweeten or season with spices, to suit the taste. Cook slowly until done.

DRIED FRUIT.—Cook same as above, only add water enough to swell the fruit, after which add the extracted honey and spices, to suit taste. Cook slowly until done.

BRAY & SEACORD.

Warthan, Cal.

A Good Showing.

The past year has been one of the most laborious I have ever experienced, having the sole care of my apiary, and an orchard of 15 acres, of both large and small fruits, adapted to this clime; also superintending and working occasionally in an excavation for a fish pond, in my orchard, where there is a number of small living springs of water, affording a constant flow the year round. I am in hopes to finish it this winter, and shall stock it with the German carp in the spring. I commenced the season with about 40 colonies of bees, and by natural swarming, increased to 160; sold off 20 in the summer, and secured about 3,000 lbs. of surplus comb honey, leaving the hives with honey in store.

HIRAM CRAIG.

Fort Calhoun, Neb.

Italians vs. Native Bees.

As I have now got all of my bees into winter quarters, I will hand in my report. I had 175 colonies last fall; lost none; wintered on the summer stands, mostly black bees. I obtained 13,000 lbs. of honey, nearly all extracted. I have now 295 colonies; have 22 queens reared in 1881 from an imported Italian; got 1 imported Italian queen of Mr. Dadant, early in 1882 and I have about 40 queens reared from her; a part of them, I think, are purely mated. I think that I will weed all of the blacks and hybrids out of my home yard, next spring, and run it with Italian bees. I think that I can rear them very nearly pure there, as there are no other bees within 4 miles. But I am not yet satisfied that the Italian bee is better than the blacks, taking all points into consideration. I intend to have one yard of them pure, and then watch them closely. I want to know which is best, as I think of going more extensively into the bee business. I shall make some chaff quadruple Langstroth hives, this winter, two stories high. I have one now that I made last year; it has 4 swarms of bees in it and I like it very well, it is the only Langstroth hive I have. E. FRANCE.

Platteville, Wis., Dec. 4, 1882.

Strong Colonies Necessary for Success.

The spring was very backward, so that owing to chilled brood and other causes, my colonies were, if anything, weaker on the 1st of June than they were on April 1. This is my season's work: April 1st, 7 weak and 2 strong colonies, 9; Nov. 15, stored into winter quarters, 14 strong colonies with an abundance of stores. My crop is 600 lbs. extracted white clover; 200 lbs. extracted fall honey; 350 lbs. comb honey; total 1,150 lbs. My experience, like that of many others, is that the number of colonies is of less importance than their strength; and I have resolved hereafter to keep only strong colonies, if I can have but a single one. F. P. BOUTEILLER.

Belle River, Ont.

Wintering in Chaff Hives.

I had 98 colonies to start with in the spring of 1881; increased to 204; all in good shape for winter, and packed them on from 5 to 7 frames, in chaff hives with division-boards, with the open space filled with chaff, and a chaff box over the frames with muslin bottom and from four to six inches of dry oats chaff, and the whole hive, except the front, covered with dry hay. The winter was very open; the entrance being open all the time. They came through with less than 5 per cent. of loss. Now, then, I had two extremes of temperature, with bees put away just the same way, except that in one case the snow and ice effectually blocked up the entrance and in the other it was open. Now, my opinion is that chaff hives and chaff packing give a more even temperature and that the chaff box on top absorbed the moisture so that the bees were kept in a healthy condition. I have packed 58 colonies this winter in chaff hives with chaff division-boards 2 inches thick, with muslin on one side and ⅛ inch boards on the other, with the muslin next to the bees. G. ROUSE.

Wahoo, Neb., Dec. 21, 1882.

Glassed or Not.

Please state whether the small sections (1 or ½ lb.) are expected to be glassed, for market.

A SUBSCRIBER.

[No. The crates should be glassed, but not the sections.—ED.]

Packed in Sawdust.

I commenced the season with 7 colonies, blacks and Italians (4 blacks and 3 Italians); increased to 27 colonies, and have them all Italianized; took 250 lbs. of extracted and 100 lbs. of comb honey in 2-pound sections. I use the Langstroth hive and pack them in sawdust, on their summer stands, similar to the plan of James Heddon.

J. W. Sears.

Harrodsburg, Ind., Dec. 27, 1882.

Thickness of Wood of Small Sections.

In No. 51, page 802, of the Bee Journal, Mr. T. F. Bingham gives the proper size to make half-pound sections; in doing so he did not give the thickness of the section, or inside measurement. Please give this in the Bee Journal; I am only a beginner, but wish to keep pace with the most modern ways of bee-keeping. As this is the time for hive-making I also wish to get the best plan of making the top bar of the frames for fastening the foundation. I am making mine 1x1¼ inches, with ⅜ above the sides and running a cut in the bottom ⅜ deep, and bevel from the top ⅜ to the bottom groove and then cut off one-half, thus leaving an open space in which to lay the foundation and tack on the piece that came out. I used them last season and found them to work very well.

Geo. Rogers.

Hollin, Ont., Jan. 2, 1883.

[The thickness of the wood for the small sections is one-eighth of an inch. Many bee-keepers make the top-bars of broad frames as you suggest, and like them. It makes but little difference, so long as the top bar is stiff, and the foundation strongly fastened. Any way that will accomplish this, will do.—Ed.]

Satisfied.

I had, in the spring, 9 colonies of hybrids and Italians; increased to 27, or 200 per cent., and obtained, of nice comb honey, 396 lbs., or 44 lbs. per colony, spring count, and did not buy a queen nor use any empty comb or foundation, and lost but little time out of my shop, attending to them. I sell all my honey at 20 cents per pound. I think there are about 200 colonies of bees in Wabash, and about one-half are blacks, kept in the style of our grandfathers; the other half are Italians and hybrids, kept in different sorts of movable frame hives, by differents sorts of men, and I am the only one, as far as I know, that takes any bee paper.

J. Copeland.

Allendale, Ill., Dec. 27, 1882.

A Question—Why Is It?

We are wintering 240 colonies of bees—80 colonies out doors in chaff hives, and the rest in an underground cellar. Those in the cellar are wintering well. The colonies out of doors are located in four different places; 18 at our home apiary, 10 three-fourths of a mile northwest, 14 two miles south, and 38 four mile south of home apiary. These colonies were all prepared for winter in the same manner, were strong in numbers and well supplied with honey. The *flora* of the four localites is the same. The colonies in three of the localities mentioned are in a fine condition. The 38 colonies four miles from the home apiary are suffering badly with dysentery, and we shall probably lose nearly all of them. I would like to have you make the above statement in the columns of the Journal and ask the bee *masters* to give *a* reason why the 38 colonies are affected and not the rest.

S. F. Newman.

Newark, O., Dec. 29, 1882.

A Satisfactory Showing.

My bees in good order for winter. I have now 80 colonies, packed in chaff. I started in the spring with 50 colonies; they gave me 48 pounds of comb honey per colony. Those run for extracted honey, gave me 100 pounds per colony; which I sold at from 12½ to 16 cents per pound and the comb honey at 16 to 20 cents per pound at home. The weather is mild; just right for bees.

J. H. Kennedy.

Little York, N. Y. Dec. 28, 1882.

In Good Condition.

I began, in the spring, with 17 colonies of black bees; obtained 1,050 lbs. of extracted honey and 200 lbs. in the comb, in one-pound sections, and increased to 38 colonies, all in good condition for the winter.

Wm. Coleman.

Devizes, Ont., Dec. 21, 1882.

Over 100 Pounds to the Colony.

I commenced in the spring with 54 colonies; increased to 80 and obtained 5,500 lbs. of honey, of which 4,500 was comb and 1,000 extracted. Our bees were in splendid condition for winter.

L. D. Ormsby.

Pierpont, Ohio, Dec. 26, 1882.

Bees Enjoying Their Warm Quarters.

It has been a very poor year in this section for apiarists, bees having gathered no white honey and but a light yield of dark honey. But, nevertheless, I must have the Bee Journal for 1883, all the same. I have 26 colonies in the cellar, evidently enjoying their warm quarters.

J. H. Sheldon.

Dorset, Vt., Dec. 22, 1882.

Mexican Clover for Bees.

My report for 1882 is as follows: Spring count 39, increase 28, total 67; sold 17. The average per colony for honey was about 30 lbs., in all 2,000 lbs. Owing to the cold weather, during the spring and summer, they did not do well. Cupalo gum yielded splendidly, but red rod was a failure; these are the only flowers that amount to anything. I have moved them across the river to where there is an abundance of white clover and poplar. I will try some sweet clover on the soil we have here, which is black loam. I have also some Mexican clover seed, which is said to bloom luxuriantly, the season through. Has anyone ever tried the same, and is it a good plant? We will test it this season and report.

Head & Brown.

Thebes, Ill., Dec. 20, 1882.

Likes to Work with Bees.

I like to work with bees, but, as for getting any profit out of them, we in central Ohio are far behind. I started last spring with 18 colonies, increased to 35; took about 175 lbs. of honey, mostly extracted; this makes a man feel as though he was a small potato, after reading some of the bouncing reports. Some of them certainly look a little *fishy*.

John M. Parson.

Tippecanoe City, Ohio, Dec. 22, 1882.

Packed in a Bee Cellar.

I started in the spring with nine colonies, and have increased to 19, by natural swarming, and have obtained 500 lbs. of comb honey, and 500 lbs. of extracted. I realized 15 to 20 cents per pound in my home market. I have them all packed for the winter in a bee cellar.

F. A. Gibson.

Racine, Wis., Dec. 23, 1882.

Packed with Buckwheat Chaff.

I put into winter quarters, last year, 13 colonies, on the summer stands; one starved, leaving 12 to start with, last spring; they increased to 32. I took 800 lbs. of extracted and 200 lbs. of comb honey. I winter ⅓ of them in the cellar and the others on the summer stands, packed with buckwheat chaff. They appear to be all doing well.

S. J. Church.

Cedar Rapids, Iowa, Dec. 27, 1882.

Good Prospect.

I have been quite successful the past year, having averaged 100 lbs. of comb honey, per colony, spring count, and increased from 70 to 121 colonies. My honey was all gathered in the prize section, the largest number from any one colony that I remember was 106, which is about 200 lbs. I sold it at from 14 to 18 cts. per lb., mostly at Indianapolis. Our prospects for next year are good at the present time.

B. Z. Smith.

Tuscola, Ill., Dec. 27, 1882.

Centralizing the Honey Market.

Bee-men ought to be combined and have but one wholesale house or dealer. The honey should be in a salable condition and all should be shipped to him. One dealer can handle all of our produce to advantage. Then the merchants will know where to send to get the lowest price, and we shall know where to ship our produce and get what it is worth. Then the market quotations will be alike in all the papers. I have 112 colonies in good condition. Bees have not gathered much surplus here for two years, but mine have been on the gain. There are some 400 colonies of bees in this county, yet we cannot supply the market. There has been some extracted honey sent here and sold for 20 cts. per lb.

Chas. Follett.

Osage, Iowa, Jan. 2, 1883.

200 Pounds from One Colony.

I shall pay more attention to marketing my honey hereafter, and want to adopt the newest methods for doing it. I could not get along at all without the Bee Journal. Had it not been for, it I should have made a poor show at bee-keeping, but, as it is, I have taken 9,000 lbs. of extracted and 110 lbs. of comb honey, as well as 200 lbs. of beeswax from 70 colonies in the spring and increased them to 130, in good condition, by natural swarming. They could have been increased to 200, had I the hives to put them in. The largest yield from one colony, was 220 lbs. of honey.

W. H. McLendon.

Lake Village, Ark., Dec. 20, 1882.

One Continued Flow of Honey.

I commenced the season of 1882 with 20 colonies; 10 in Langstroth hives and 10 in box hives; transferred those in box hives to Langstroth hives on May 1. It being wet and cold, I had to feed until June 3, when the white clover blossoms began to "nod their heads at the bees," which are the Italians, hybrids and blacks. They soon took the hint, and we had one continued flow of honey from that time on. I increased to 45 colonies, obtained 2,000 lbs. of comb and 1,000 of extracted honey. The bees are in a good dry cellar, waiting for the balmy days of spring to come.

Wm. Heald.

Mt. Sterling, Iowa, Dec. 22, 1882.

Bees Pay Well.

I began the season with 14 colonies, 4 of which were transferred in May. one colony did *nothing* during the whole season, consequently I can really count but 13 available. I ran 8 of the colonies for extracted honey, with sections for side storing in several of them. I now have 30 colonies all put into winter quarters on the summer stands, packed in hay, and sheltered entirely from rain or snow, and protected on the west and north by a board fence. I had 10 swarms and increased 6 by division. Introduced untested 12 queens, 9 of which were successful, all producing apparently so far an excellent offspring. My honey product foots up, 781 lbs. one-pound sections; 234 lbs. bulk; 1,000 lbs. extracted; in all 2,015 lbs. really from spring count of 13 colonies. You remember, 2 seasons since, of selling me a queen; she produced beautiful bees and active workers. This season that colony gave me 284 lbs. of honey, and an increase of 5 swarms, the last of which came out on Aug. 27, filled the brood chamber and gave 22 lbs. of nice surplus comb honey. I think my net results would have been at least 1,000 lbs. larger had I given strict attention at the proper time. This does not near compete with some of the reports, but when coming from one who is not a practical bee-keeper, it gives you an idea what a man of average intelligence may do, even with the pressing duties of another business. I believe I can, in localities in this county, buy land cheap, and with 150 or 200 colonies, that have pasturage intelligently prepared, make $1,500 to $2,000 clear money yearly, besides paying some attention to stock or poultry.

F. A. Grove.

Kirksville, Mo., Dec. 30, 1882.

Size of the Half-Pound Sections.

After spending a few days with two of the brightest and most experienced bee-keepers in this country, I have settled, in my own mind, the size of section that I shall use to hold one-half pound gross, viz.: 4¼x2 13-16 inches plump, by 1¾, or, more exactly, 7 to the foot for separators, or 1½ without. This measurement, 4¼, is adapted to the old length of fixtures, cases, broad frames, etc. The 2 13-16 piece is such a width as makes 3 fill the place of 2, 4¼, thus, 6 of them fill a broad frame in length. The 1¾ with, and 1½ inches without separators, is such a thickness as will fit my case, 8 to the foot, but necessitates a change and addition of cases and partitions, using 5 instead of 3. For the broad frames it simply means cut them down ¼ in thickness and use separators. If I used broad frames at all I should surely use the separators. While this section is not adapted to either case or broad frames, just as they are, it requires an alteration that costs but very little in either capital or labor, and the comb it will contain will be one well adapted to storing and finishing rapidly, shipping safely and selling quickly. Do not be in a hurry to change from the one-pound section where you have them all in working order. You may be sorry if you do. Wait and see what the market says when plenty of both are there.

James Heddon.

Dowagiac, Mich., Jan. 1, 1883.

Bees in Good Condition.

My 58 colonies of bees are in good condition. Some gave me 28 lbs. of comb honey, and some 50 to 60 lbs. of extracted honey. I think any number of the Bee Journal is worth to me all it costs for a year.

G. W. Ashby.

Valley Station, Ky.

Abundantly Satisfied.

Just received the last number of the Bee Journal for 1882, and I have it in the Emerson Binder, and on looking over the numbers, I cannot tell you how well satisfied I am, to think I have them all in, clean and snug. Without the binder, there would have been great risk of soiling the numbers, to say nothing of them being laid aside; but with the binder, all this is avoided. To all bee-keepers who do not take the Bee Journal, I would say, take it for one year; you do not know the loss you suffer by not taking it; and to all who take the Journal, and not the binder, I would advise, take it, you will never regret it. It will do more than merely satisfy you; if you have any phrenological bump of order, you will be compelled to say and do as I advise; you will be compelled to acknowledge that you are abundantly satisfied.

Edward Moore.

East St. Barrle, Ont., Dec. 29, 1882.

Queen Born without Wings.

In a letter published in the *Bulletin D'Apiculture de la Somme* just to hand, there is the following, which is interesting to all scientific bee-keepers: "Miss Josephine Chinni, of Bologna, Italy, a distinguished apiarist and queen breeder, has a queen bee which was born without wings, and, for all that, has been a very good layer of drone eggs, and worker eggs also. If you want to know more details, write her, and I do not fear contradiction."

Arthur Todd.

Philadelphia, Pa., Dec. 25, 1882.

Correction.

On page 809 of the Bee Journal for Dec. 20, in the 10th line from the bottom of the first column, for the word "Heddon's," read Lowmaster's.

Wagon Works, O. A. B. Mason.

Enticed to Take a Flight.

On Christmas day it was so pleasant that our bees came out from the hives. Next morning I found great numbers dead at the entrances. Was it so cold that they died before going back in? Or what? It would hardly do, would it—to open the hives and look in?

M. E. Stevens.

Lebanon, Ohio, December 29, 1882.

[Of course, they became chilled and could not return to the hives. While the sun was warm—the air was very cold. They were probably old bees that would soon have died.—Ed.]

Bees Pay Better than Stock.

My apiary, which remunerates for labor spent, is the best of anything yet. My 300 head of feeding steers and 250 head of fat hogs afford me no greater pleasure than my bees. The steers cannot compete with the bees for the amount of capital invested, and one is just as gentle as the other. I have hardly a steer but what I can ride, and my bees are just as tame, when necessary to get near them. I saw Mr. Jackson Woodward, of Mahaska county, who said that from 40 colonies this year he obtained 90 swarms, put back 60, leaving him 70 colonies, all told. From these he took 2,600 lbs. of extracted and 500 lbs. of comb honey. He is using the improved Langstroth hive, and is selling off all he has in the old form, at $10 per colony. My bees fairly swarmed on my canning corn, this summer. I think it pays well to plant it for its honey qualities, if nothing more; but corn brought at the canning factory, $12 per acre, after the bees were done with it. My buckwheat did well.

G. B. Olney.

Atlantic, Iowa, Dec. 23, 1882.

Honey Market at Home.

I commenced the season with 60 colonies; increased to 100 by natural swarming; obtained 3,000 lbs. comb honey, all stored in one-pound sections; sold it for 18 cts., wholesale, at home.

Wm. Courtney.

Richview, Ill., Dec. 29, 1882.

THE AMERICAN BEE JOURNAL

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☞Articles for publication must be written on a separate piece of paper from items of business.

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We supply the **American Bee Journal** and any of the following periodicals, one year, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage is prepaid by the publishers.

	Publishers' Price.	*Club*
The Weekly Bee Journal,	$2 00..	
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Bee-Keepers' Magazine (A.J.King).	3 25 .	3 00
Bee-Keepers'Exch'nge(Houk & Peet)	3 00..	2 75
Bee-Keepers' Guide (A.G.Hill)	2 50..	2 35
Kansas Bee-Keeper	2 60..	2 40
The 6 above-named papers	6 35..	5 50
The Weekly Bee Journal one year and		
Prof. Cook's Manual(bound in cloth)	3 25..	3 00
Bees and Honey, (T. G. Newman) "	2 75..	2 50
Binder for Weekly Bee Journal	2 75..	2 50
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The **Monthly Bee Journal** and any of the above, $1 less than the figures in the last column.

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

☞ The BEE JOURNAL is mailed at the Chicago postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

☞ Attention is called to a few changes in our clubbing list for 1883, as given on this page. Those interested will please take notice.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

☞Renewals may be made at any time; but all papers are stopped at the expiration of the time paid for, unless requested to be continued.

☞ Our new location, No. 925 West Madison St., is only a few doors from the new branch postoffice. We have a telephone and any one in the city wishing to talk to us through it will please call for No. 7087—that being our telephone number.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies	(120 pages)	$1 00
" 100 colonies	(220 pages)	1 50
" 200 colonies	(420 pages)	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but should be written on separate pieces of paper.

☞Do not let your numbers of the BEE JOURNAL for 1882 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1883, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with $6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For four subscribers, with $8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with $10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

◆

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75; or with Bees and Honey, in cloth, $2.50. The Monthly BEE JOURNAL and either of the above for one dollar less.

◆

Subscription Credits.—After sending subscriptions to this office, we would respectfully ask every one to look at the label on the wrapper of the next two papers, and there they will find the credit indicated thus: Those who have paid for the first six months of this year will find "June 83" after their names. Those who have paid for the whole year will find "Dec. 83" on their papers. The credit runs to the *end* of the month indicated.

The credit given on THAT LABEL is a sufficient notification of subscriptions due and receipt for payments made. If not so indicated within two weeks after sending money to us, you may be sure something is wrong, and should write to us about it. It will save annoyance and trouble if our subscribers will give this matter due attention.

◆

☞Postage stamps, of one, two or three cent denomination, accepted for fractional parts of a dollar; but money is preferred.

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., January 8, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The supply of extracted honey is fully up to the demand. My quotations are: 7c. for dark and 9c. for light, delivered here.

BEESWAX—It is quite scarce. I am paying 27c. for good yellow wax, on arrival; dark and off colors, 17@22c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The demand is good for extracted in barrels as well as in glass jars and tin buckets; arrivals are fair. The demand is fair for comb honey, which, however, is not cheap enough to make trade lively. Extracted brings 7@10c. on arrival; comb honey, 14@20c.

BEESWAX—Is scarce and brings 20@27c. on arrival.

CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand for comb honey does not keep pace with the receipts. There is a large surplus on this market at present, and prices are from 2 to 3c. lower than last month.

We quote: white comb honey, in 1@2 lb. sections, 17@18c. Dark comb honey, hardly any demand. It is held at 12½@15c. Extracted—White brings from 9@10c.; dark, 8@9c.; kegs, half-barrels and casks bring about same price.

BEESWAX—Choice Yellow, 30c.; dark to medium, 18@25c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—Business in this line has been extremely dull the past week. Quotations are little more than nominal.

White comb, 17@20c; dark to good, 11@13½c; extracted, choice to extra white, 8½@9½c.; dark and candied, 7@8c.

BEESWAX—We quote 25@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Dull. Comb, at 16c. for large or hard to 19@20c. for choice bright in small packages; extracted at 8@9c.; strained, 6½@7c.; choice, in smaller quantities, brings more.

BEESWAX—Prime bright steady at 27@28c.

W. T. ANDERSON & CO., 117 N. Main Street.

CLEVELAND.

HONEY—Has changed in price a very little, we find it necessary to sell all grades about 1 cent per ℔. less. Best white, in 1 ℔ sections, 20@21c. per per pound; in 2 lb. sections, 18@20c. Extracted is very dull indeed, hardly any sale.

BEESWAX—Scarce, 28@30c.

A. C. KENDEL, 115 Ontario Street.

NEW YORK.

HONEY—There is only a moderate supply of choice to fancy white clover honey, and prices are still held firmly, though the demand is not large. Buckwheat and extracted honey continue slow.

We quote: White clover, first quality, 1 ℔ boxes, 25c; 2 lb. boxes, 23@25c.; buckwheat, 1 ℔ boxes, 20c.; 2 lb. boxes, 16c. Extracted, white, 11@12c.; dark, 8@9c.

BEESWAX—The supply has been light and prime lots held a shade higher.

Western pure, 30@31c; southern, pure, 31@32c.

D. W. QUINBY, 105 Park Place.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.: 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—30c.

CROCKER & BLAKE, 57 Chatham Street.

◆

Special Notice.

It gives me pleasure to announce that Dr. A. X. Illinski, of East St. Louis, Ill., and myself, have formed a co-partnership in bee-keeping, queen-rearing and supply furnishing. The Doctor is well known as an enterprising, progressive, and enthusiastic bee-keeper, of ample means. The style of the new firm will be "Flanagan & Illinski," and the management of the business will be conducted by myself as heretofore. E. T. FLANAGAN.

Belleville, Ill., Jan. 3, 1883.

Catalogues Received.—We have received copies of the following price lists for 1883:

James Forncrook & Co., Watertown, Wis.—"One-Piece Sections," etc.

Merriam & Falconer, Jamestown, N. Y.—"Apiarian Supplies" of all kinds.

J. S. Tadlock, Luling, Texas.—"Bee-Keepers' Supplies."

J. V. Caldwell, Cambridge, Ill.—"Supplies for the Apiary."

A. C. Nellis, Canajoharie, N. Y.—Catalogue of "Garden, Field and Flower Seeds."

◆

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

◆

It Pays.—I have sold all of my sweet clover seed. Advertisements in the AMERICAN BEE JOURNAL pay.

I. R. GOOD.

Nappanee, Ind., Dec. 24, 1882.

Advertisements.

THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

PLYMOUTH ROCKS
Iroquois Strain. Four Yards.
Correspondence cheerfully answered. Prices reasonable.
W. H. BUSSEY, 131 Lake Street, Chicago

SWEET CLOVER SEED.—New and clean, 25 cts. per lb. BEN CLENDENON, Grinnell, Ioa
50w13

DUNHAM COMB FOUNDATION—40c. per pound; extra thin and bright, 10 sq. ft. to the lb. 48c. Send for samples. Wax worked 10c. per lb. F. W. HOLMES, Coopersville, Mich. 13w1y

Bees for Sale.

50 Colonies of Bees, in Gallup frames, cheap.
200 Colonies of Bees, in Langstroth frames in prime condition.
J. H. ROBERTSON,
36wtf Pewamo, Ionia Co., Mich.

STUDENTS
IN BEE-CULTURE.

Having had such good success for two years past in teaching the theory and practice of honey-producing, I have now made arrangements to accommodate a large class during the coming season. I shall aim to give a five months' instruction, at the end of which time I hope and expect to turn out bee-keepers competent to profitably engage in the pursuit, or such as will be sought for as assistants, at wages above common laborers. All interested, write for terms.

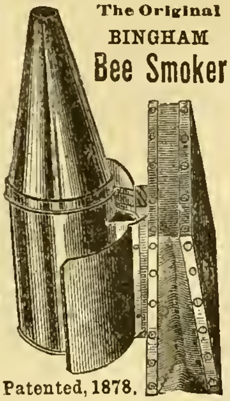
BEE-KEEPERS' SUPPLIES
on hand, as usual. Beeswax wanted.
JAMES HEDDON.
Dowagiac, Mich. 1*tf

"RED TAPE!"

Who will be the first to copy?

25,000 IN USE.

The Original
BINGHAM
Bee Smoker



Patented, 1878.

If you buy the Original Patent Bingham Bee Smoker, you will aid the inventor of improved bee smokers—get the best, that never go out—always please—never is complained of—the standard of excellence the world over—better and handsomer this season than ever before. Price per mail, postpaid, from 65 cts. to $2. Our patents cover all the smokers that will burn sound stove-wood, or do not go out. If you buy our smokers and honey knives first, you will have to buy no others.

PRICES:

	Handed to Customer.	By Mail, Postpaid.
Wide shield Conqueror, 3 inch	$1 75	$2 00
Large Bingham Smoker (wide shield), 2½ inch	1 50	1 75
Extra Bingham Smoker (wide shield), 2 inch....................	1 25	1 50
Plain Bingham Smoker, 2 inch....	1 00	1 25
Little Wonder Bingham Smoker, 1¾ inch	50	65
Bingham & Hetherington Honey Knife, 2 inch....................	1 00	1 15

To sell again, apply for dozen or half-dozen rates.

Send for free description and testimonials, to

BINGHAM & HETHERINGTON,
t7wtf **Abronia, Mich.**

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,
A Langstroth Bee Hives, Honey Sections, etc.,
Apply to C. F. MUTH,
976 and 978 Central Ave., **CINCINNATI, O.**

☞ Send 10c. for Practical Hints to Bee-Keepers.

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65 *ENGRAVINGS*

The Horse

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information,

Price 25 cents.—Sent on receipt of price, by

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925 West Madison Street, CHICAGO ILL.

LANGSTROTH AND SIMPLICITY CHAFF HIVES, with movable upper story, section boxes, metal-cornered brood frames, wide Langstroth frames and comb foundation. Send for Price List. A. B. MILLER & SON,
44wtf Wakarusa, Elkhart Co., Ind.

LIVE BEE-KEEPERS WANTED,

to introduce the new lime cushion, the only protection yet discovered that will carry the bees safely through winter and spring without fail. Send $50, for right to retail this cushion in your county, or send $5 for one apiary right to patentee. Remit by registered letter or P. O. order.

F. DELLA TORRE,
74 Charles-st. Avenue, Baltimore, Md.
Patented April 25, 1882. No. 254,932. 45w13t

THIS PAPER may be found on file at Geo. P. Rowell & Co.'s Newspaper Advertising Bureau (10 Spruce St.), where advertising contracts may be made for it in **NEW YORK.**

Cheap! Cheaper!! Cheapest!!!

300 COLONIES OF BEES

for sale, in movable frame hives. Also, Queens, Nuclei, Bees by the pound, Hives, Sections, Smokers, Seeds for Honey Plants, and everything a live bee-keeper needs. Send for circular and price list to **FLANAGAN & ILLINSKI,**
Box 819, Belleville, St. Clair co., Ill.
(Proprietors of Rose Hill, Cahokia, Falling Springs and Lake Apiaries. 1wmly

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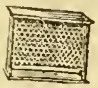
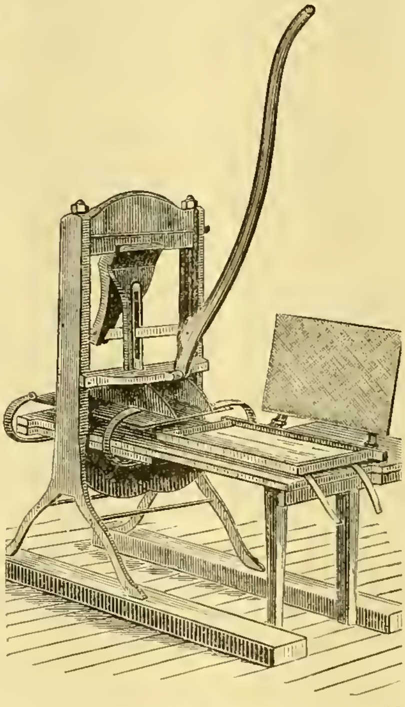
COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

Given's Foundation Press.



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D. S. GIVEN & CO.,
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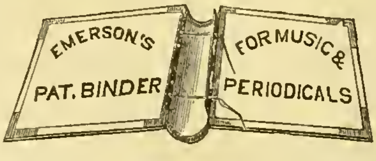
AND KEEP THEM

NEAT AND CLEAN.



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IS THE NEATEST AND CHEAPEST.

Any one can use them. Directions in each Binder.

For Monthly Bee Journal..............	**50c.**
For Weekly Bee Journal..............	**75c.**

Address, **THOMAS G. NEWMAN,**
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A NEW BEE BOOK!

Bees & Honey

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN.

Editor of the Weekly Bee Journal.

It contains 160 profusely illustrated pages, is "fully up with the times" in all the various improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey bee, and at the same time produce the most honey in its best and most attractive condition. Chief among the new chapters are "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. Price, bound in cloth, **75 cents**; in paper covers, **50 cents**, postpaid.

925 W. Madison Street, Chicago, Ill.

Appreciative Notices.

Carefully prepared for beginners.—Farmers Cabinet, Amherst, N. H.

A very valuable work to those engaged in bee-raising.—News, Prairie City, Iowa.

We advise all who keep bees to send for this excellent work.—Journal, Louisiana, Mo.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Tenn.

Carefully prepared, and of vast importance to bee-raisers.—Indianian, Clinton, Ind.

A neat and abundantly illustrated hand-book of apiculture.—American Agriculturist, N. Y.

New and valuable, and embellished with 109 beautiful engravings.—Democrat, Salem, Ind.

Much practical useful information, in a cheap form.—Daily Standard, New Bedford, Mass.

Contains all the information needed to make bee-culture successful.—Eagle, Union City, Ind.

Just such a work as should be in the hands of every beginner with bees.—News, Keithsburg, Ill.

A valuable work for all who are interested in the care and management of bees.—Democrat, Allegan, Mich.

The most perfect work for the price ever yet produced on the subject of bee-culture.—Anti-Monopolist, Lebanon, Mo.

The engravings are fine. It is gotten up in the very best style, and is cheap at the price.—Farmer, Cleveland, O.

It comprises all that is necessary for successful bee-culture, save experience and good judgment. —Daily Republican, Utica, N. Y.

A manual, containing all the newest discoveries in the management of these little workers.—Plain Dealer, St. Lawrence, N. Y.

Full of practical instruction, that no one who contemplates keeping bees can do without.—Farmers' Journal, Louisville, Ky.

Gives minute details for the management and manipulations necessary to make bee-keeping a success.—Col. Valley and Farm.

It embraces every subject that can interest the beginner in bee-culture. The engravings perfectly illustrate the text.—Farm and Fireside, Springfield, O.

Embraces every subject of interest in the apiary, giving very thorough details of the management and manipulations necessary to make bee-keeping a success.—Farm, Longmont, Colo.

Written in an interesting and attractive manner, and contains valuable information for all readers, even though they be not directly interested in the care of bees.—Sentinel, Rome, N. Y.

It is a valuable and practical book, and contains a complete resume of the natural history of the little busy bee, as well as of all that one needs to know in their care and management.—Chicago Herald.

Describes all the newest discoveries in the art, by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive shape.—Signal, Napoleon, O.

Contains a vast fund of information in regard to bee-culture. He who would keep abreast of the times must keep posted in all the improvements in his line. We advise all interested to get a copy of this book.—Daily Times, San Bernardino, Cal.

It embraces every subject that will interest the beginner. It describes all the newest discoveries in the art by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive form. It is embellished with beautiful engravings, and is the most perfect work of the kind, for the price, that has ever come under our notice.—Farmer, Lancaster, Pa.

☞ **A Liberal Discount to Dealers by the Dozen or Hundred.**

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Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent postpaid for $2. Address,

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Excelsior Dunham and Vandervort *FOUNDATION.*

Owing to the large advance in the price of wax, I now quote prices thus: Dunham, 10 to 50 lbs., 42c., over 50 lbs., 41c., less than 10 lbs., 44c.; Vandervort, 10 sq. feet to the lb., 1 to 10 lbs., 57c., 10 to 50 lbs., 54c. No discounts. Circular free.

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3wty Cambridge, Henry Co., Ill.

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AND BEE-KEEPER'S ADVISER.

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Send your Orders for our Circular, and Prospectus of our NEW BOOK on QUEEN REARING.

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PRIZE QUEENS.

Tested Prize Queen, in a 2-frame nucleus, 9x17, each,	$4 00
Same in nucleus, 4 fra., 8x8,	4 00
Tested Prize Queen, by mail,	3 00
Prize Queen, warranted purely fertilized	2 00
Queen, not standard size....	1 00
Full Colony, 8 frames, Prize Queen	9 00

Before July 1, add $1 each.
Cash Orders filled in rotation.
Address **E. L. BRIGGS,**
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Send to I. R. GOOD

For Price List, for 1883, of

HOLY-LAND AND ITALIAN BEES AND QUEENS, And "Given" Comb Foundation.

He will give satisfaction or refund the money.
1*5t Nappanee, Elkhart Co., Ind.

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I buy and sell Honey for Cash only. As I do no Commission business, I will not accept shipments without previous correspondence.

ALFRED H. NEWMAN,

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INCLUDING SECTIONS FOR COMB HONEY, SMOKERS, VEILS, GLOVES,

Honey and Wax Extractors, Comb Foundation, Kegs and Pails for Honey, Seeds for Honey Plants, etc.,

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Illustrated Catalogue sent free upon application.

BEESWAX.

I pay **27c.** per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

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The Bee-Keeper's Guide;
OR,
MANUAL OF THE APIARY,
By A. J. COOK,

Of Lansing, Professor of Entomology in the State Agricultural College of Michigan.

—:o:—

320 Pages; 133 Fine Illustrations.

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This is a new edition of Prof. Cook's Manual of the Apiary, enlarged and elegantly illustrated. The first edition of 3,000 copies was exhausted in about 18 months — a sale unprecedented in the annals of bee-culture. This new work has been produced with great care, patient study and persistent research. It comprises a full delineation of the anatomy and physiology of the honey bee, illustrated with many costly wood engravings — the products of the Honey Bee; the races of bees; full descriptions of honey-producing plants, trees, shrubs, etc., splendidly illustrated—and last, though not least, detailed instructions for the various manipulations necessary in the apiary.

This work is a masterly production, and one that no bee-keeper, however limited his means, can afford to do without. It is fully "up with the times" on every conceivable subject that can interest the apiarist. It is not only instructive, but intensely interesting and thoroughly practical.

—:o:—

Read the following opinions of the Book;

All agree that it is the work of a master and of real value.—*L'Apiculture*, Paris.

I think Cook's Manual is the best of our American works.—LEWIS T. COLBY.

It appears to have cut the ground from under future book-makers.—*British Bee Journal.*

Prof. Cook's valuable Manual has been my constant guide in my operations and successful management of the apiary.—J. P. WEST.

I have derived more practical knowledge from Prof. Cook's New Manual of the Apiary than from any other book.—E. H. WYNKOOP.

This book is just what everyone interested in bees ought to have, and which, no one who obtains it, will ever regret having purchased.—*Mich. Far.*

To all who wish to engage in bee-culture, a manual is a necessity. Prof. Cook's Manual is an exhaustive work.—*Herald*, Monticello, Ill.

With Cook's Manual I am more than pleased. It is fully up with the times in every particular. The richest reward awaits its author.—A. E. WENZEL.

My success has been so great as to almost astonish myself, and much of it is due to the clear, disinterested information contained in Cook's Manual.—WM. VAN ANTWERP, M. D

It is the latest book on the bee, and treats of both the bee and hives, with their implements. It is of value to all bee-raisers.—*Ky. Live Stock Record.*

It is a credit to the author as well the publisher. I have never yet met with a work, either French or foreign, which I like so much.—L'ABBE DU BOIS, editor of the *Buletin D' Apiculteur*, France.

It not only gives the natural history of these industrious insects, but also a thorough, practical, and clearly expressed series of directions for their management; also a botanical description of honey producing plants, and an extended account of the enemies of bees.—*Democrat*, Pulaski, N. Y.

We have perused with great pleasure this *vade mecum* of the bee-keeper. It is replete with the best information on everything belonging to apiculture. To all taking an interest in this subject, we say, obtain this valuable work, read it carefully and practice as advised.—*Agriculturist*, Quebec.

This book is pronounced by the press and leading bee-men to be the most complete and practical treatise on bee-culture in Europe or America; a scientific work on modern bee management that every experienced bee-man will welcome, and it is essential to every amateur in bee-culture. It is handsomely printed, neatly bound, and is a credit to the West.—*Western Agriculturist.*

This work is undoubtedly the most complete manual for the instruction of bee-keepers which has ever been published. It gives a full explanation regarding the care and management of the apiary. There is no subject relating to the culture of bees left untouched, and in the compilation of the work Prof. Cook has had the advantage of all the previous knowlede of apiarists, which he uses admirably to promote and make popular this most interesting of all occupations.—*American Inventor.*

—:o:—

PRICE—Bound in cloth, **$1.25**; in paper cover, **$1.00** by mail prepaid. Published by

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Bee-Keeper's Guide; or, Cook's Manual of the Apiary.—Entirely re-written, elegantly illustrated and fully "up with the times" on every subject of bee-culture. It is not only instructive, but intensely interesting and thoroughly practical. The book is a masterly production, and one that no bee-keeper, however limited his means, can afford to do without. Cloth, **$1.25**; paper cover, **$1.**

Quinby's New Bee-Keeping, by L. C. Root—The author treats the subject of bee-keeping so that it cannot fail to interest all. Its style is plain and forcible, making all its readers realize that its author is master of the subject.—**$1.50.**

Novice's ABC of Bee-Culture, by A. I. Root—This embraces "everything pertaining to the care of the honey-bee," and is valuable to beginners and those more advanced. Cloth, **$1.25.**

King's Bee-Keepers' Text-Book, by A. J. King.—This edition is revised and brought down to the present time. Cloth, **$1.00.**

Langstroth on the Hive and Honey Bee.—This is a standard scientific work. Price, **$2.**

Blessed Bees, by John Allen.—A romance of bee-keeping, full of practical information and contagious enthusiasm. Cloth, **75c.**

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—Third Edition. "Fully up with the times," including all the various improvements and inventions. Chief among the new chapters are: "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. It contains 160 pages, and is profusely illustrated. Price, bound in cloth, **75c.**; in paper covers, **50c.**, postpaid.

Bienen Kultur, by Thomas G. Newman, in the GERMAN language. Price, in paper covers, 40 cents, or $3 per dozen, postpaid.

Dzierzon Theory;—presents the fundamental principles of bee-culture, and furnishes the facts and arguments to demonstrate them. **15 c.**

Honey, as Food and Medicine, by Thomas G. Newman.—This pamphlet discourses upon the Ancient History of Bees and Honey, the nature, quality, sources, and preparation of Honey for the Market; Honey as food, giving recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc; and Honey as Medicine, with many useful Recipes. It is intended for consumers, and should be scattered by thousands, creating a demand for honey everywhere. Published in **English** and **German.** Price for either edition, **6c.**; per dozen, **50c.**

Wintering Bees.—This contains the Prize Essays on this subject, read before the Centennial Bee-Keepers' Association. Price, **10c.**

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, and instructions on the exhibition of bees and honey at Fairs, etc., by T. G. Newman. Price **10c.**

The Hive I Use—Being a description of the hive used by G. M. Doolittle. Price, **5c.**

Foul Brood; its origin, development and cure. By Albert R. Kohnke. Price, **25c.**

Extracted Honey; Harvesting, Handling and Marketing.—A 24-page pamphlet, by Ch. & C. P. Dadant, giving in detail the methods and management adopted in their apiary. This contains many useful hints.—Price **15c.**

Bee Pasturage a Necessity, by Thomas G. Newman—Giving advanced views on this important subject, with suggestions what to plant, and and when and how: 26 engravings. Price, **10c.**

Practical Hints to Bee-Keepers, by Chas. F. Muth; 32 pages. It gives Mr. Muth's views on the management of bees. Price, **10c.**

Swarming, Dividing and Feeding Bees.—Hints to Beginners, by Thomas G. Newman. Price **5 cents.**

Bees in Winter, with instructions about Chaff-Packing, Cellars and Bee Houses, by Thomas G. Newman. Price **5c.**

Queen-Rearing, by Henry Alley—A full and detailed account of TWENTY-THREE years' experience in rearing queen bees. The cheapest, easiest and best way to raise queens. Never before published. **Price $1.00.**

Food Adulteration; What we eat and should not eat. This book should be in every family, and ought to create a sentiment against adulteration of food products, and demand a law to protect the consumer against the numerous health-destroying adulterations offered as food. 200 pages **50c.**

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Kendall's Horse Book.—No book could be more useful to horse owners. It has 35 engravings illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has recipes, a table of doses, and much valuable horse information. Price **25c.** for either the English or German editions.

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Fisher's Grain Tables for Farmers, etc.—192 pages, pocket form; full of useful tables for casting up grain, produce, hay; cost of pork, interest; wages tables, wood measurer, ready reckoner, plowing tables and more miscellaneous matter and useful tables for farmers and others than any similar book ever published. Ask your bookseller for it. Sent post-paid for **40** cents.

Chicken Cholera, by A. J. Hill.—A treatise on its cause, symptoms and cure. Price, **25c.**

Deutsche Buecher,

Ueber Bienenzücht.

Bienen Kultur, oder erfolgreiche Behandlung der Bienen, von Thos. G. Newman. Dieſes Pamphlet enthält Belehrungen über folgende Gegenſtände—Oertlichkeit des Bienenſtandes—Honig pflanzen—Erziehung der Königin—Füttern — Schwärmen —Ableger—Verſetzen—Italieniſiren—Züſetzer von Königinnen—Ausziehen—Bienen behandeln und beruhigen; weiter enthält es ein Kapitel, worin die neueſte Methode für die Herrichtung des Honigs für den Handel beſchrieben iſt. Preis 40 Cents.

Honig als Nahrung und Medizin—von Thomas G. Newman. Dieſes enthält eine klare darſtellüng über Bienen und Honig des Alterthums; die Beſchaffenheit, Qualität, Quellen und Zubereitung des Honigs für den Handel; Honig als Nahrungsmittel, angebend wie man Honigkuchen, Formküchelchen, Puddings, Schaumkonfeet, Weine, u.ſ.w zubereiten kann; ferner Honig als Medizin mit vielen Rezepten. Es iſt für den Conſumenten beſtimmt, und ſollte vieltauſendfältig über das ganze Land verbreitet werden. Preis 6 Cents.

Das Pferd und ſeine Krankheiten—Von B. J. Kendall, M. D., enthaltend ein alphabetiſch geordnetes Verzeichniß der verſchiedenen Pferdekrankheiten, ſammt den Urſachen, Symptomen und der richtigen Behandlung derſelben; ferner, eine Sammlung werthvoller Rezepte. Preis 25 Cents.

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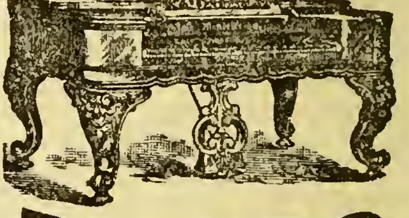

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This Oil is abstracted from a peculiar species of small **White Shark**, caught in the Yellow Sea, known as *Carcharodon Rondeletii*. Every Chinese fisherman knows it. Its virtues as a restorative of hearing were discovered by a Buddhist Priest about the year 1410. Its cures were so numerous and **many so seemingly miraculous**, that the remedy was officially proclaimed over the entire Empire. Its use became so universal that for **over 300 years no Deafness has existed among the Chinese people.** Sent, charges prepaid, to any address at $1.00 per bottle.

HEAR WHAT THE DEAF SAY!

It has performed a miracle in my case.

I have no unearthly noises in my head, and hear much better.

I have been greatly benefited.

My deafness helped a great deal—think another bottle will cure me.

"Its virtues are UNQUESTIONABLE and its CURATIVE CHARACTER ABSOLUTE, AS THE WRITER CAN PERSONALLY TESTIFY, BOTH FROM EXPERIENCE AND OBSERVATION. Write at once to HAYLOCK & JENNEY, 7 Dey Street, New York, enclosing $1, and you will receive by return a remedy that will enable you to hear like anybody else, and whose curative effects will be permanent. You will never regret doing so."—EDITOR OF MERCANTILE REVIEW.

☞ To avoid loss in the mails, please send money by REGISTERED LETTER.

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OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED EXCLUSIVELY TO PROGRESSIVE BEE CULTURE.

Vol. XIX. Chicago, Ill., January 17, 1883. No. 3.

THE AMERICAN BEE JOURNAL

PUBLISHED BY

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

925 WEST MADISON ST., CHICAGO, ILL.

Weekly, **$2** a year; Monthly, **$1.**

☞ Any person sending a club of six is entitled to an extra copy (like the club) sent to any address desired. Sample copies furnished *free.*

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George Neighbour & Sons, London, England, are our authorized agents for Europe.

Entered at the Chicago Post Office as Second Class Matter.

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Planting for Honey.

"Straws show which way the wind blows," is an old but true remark. We were reminded of this, when we noticed the following item in the Chicago *Times* of this week.

> Bee-keepers are reaching the conclusion that to secure the best results they must cultivate honey-plants. Alsike clover is said to be equal to white clover. Buckwheat, basswood, the blackberry, and raspberry are all recommended for bee food. Catnip, motherwort, rape, mustard, sweet clover, and Rocky mountain bee-plant are recommended to be sown in waste places.

Planting for honey is getting to be a popular "song," and should be kept up until it is everywhere "sung"—and acted upon by those who have the care of bees.

* * *

☞ The editor of the Daily *Times* of San Antonio, Texas, has been reading Cook's Manual of the Apiary, and the following is his opinion of it, which we find in the Daily *Times* of Jan. 8, 1883: "Till we read this book we thought bee-keeping a sort of side pastime, but we are now convinced that bee-keeping requires study and real work. Bees are good servants, but like many other servants they require a good deal of attending to. To those who keep bees this book is a necessity, and the sooner they buy it the better they will be pleased."

New Catalogues.—We have received the following Catalogues and Price Lists for 1883:

Thorburn & Titus, 158 Chambers Street, New York, Vegetable and Flower Seeds.

Cole & Brothers, Pella, Iowa, Flower and Vegetable Garden Seeds.

R. M. Morrill, Plymouth, Ind., Flower and Vegetable Seeds.

D. S. Given & Co., Hoopeston, Ill., Given Foundation Press and Wiring Machines.

* * *

☞ "The Bee and Poultry Magazine," is the new title of the paper published by King, Keith & Co., 14 Park Place, New York. The January number is on our desk and presents a neat appearance. It contains 20 pages devoted to bees and 10 to the Poultry Department. It is published at $1.25 a year.

* * *

☞ Mr. Frank Benton has again removed his residence. This time from Beyrout, Syria, to Athens, Greece—the ancient seat of learning, and mistress of the world.

* * *

☞ The Bee-Keepers' *Guide* published by A. G. Hill, Kendallville, Ind., comes out in pamphlet form with the January number. It is much improved in appearance, and well filled with reading matter about bees.

* * *

Special Notice.—We will, hereafter, supply the Weekly BEE JOURNAL for 1883 and Cook's Manual in cloth for $2.75, or the Monthly and Manual in cloth for $1.75.

* * *

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Another "Kind Suggestion."

The following letter from Dr. A. B. Mason is just received, and as he wants to place the matter before our readers, we will let him "suggest:"

DEAR JOURNAL:—On page 33 of the BEE JOURNAL for 1882 under the heading of "A Kind Suggestion," you say, "We are always pleased to receive suggestions or criticisms concerning the BEE JOURNAL, and hence give place to the following," from L. R. Jackson, Fairland, Ind.

"I like the size of the BEE JOURNAL much better than the old, but do not like the advertisements on the first page. We have become accustomed to look on the first page for the valuable editorials, and think the BEE JOURNAL would look much neater with all the advertisements at the back," etc.

When I saw the above I was very much inclined to "*suggest*," that the first two numbers of the Weekly BEE JOURNAL for 1882 were just right in that respect. Although I have several times been tempted to do so, I have not "suggested," but yesterday when getting the BEE JOURNALS for 1882 ready for the bindery, I thought, not out loud, I wish I had influence enough with the "powers that be," at the JOURNAL office to induce them to put the advertisements on the first and last leaves, so they can be removed when we want our JOURNALS bound. I have no use for 208 pages of advertisements in a bound volume that without them has 624 pages. Like Mr. Jackson, I like to see the valuable editorials, but if they are on the first page and that *should* get dirty I do not like it one bit, but if they are on the the next leaf I can tear off the defaced one and have the editorials all bright and clean. I have taken the BEE JOURNAL for thirteen years, and except the volume for 1882, have them all nicely bound, and shall be glad when I get through tearing off leaves of advertisements and pasting on the loose leaves ready for the bindery.

A few days since one of your patrons told me he had heard more than a dozen speak of this very matter, so you see I am not alone in this "suggestion," and although many may think as Mr. Jackson does, and say so in the JOURNAL, still I believe if those that think as I do about this, were to hold up their hands we should have the "balance of power."

You know, Mr. Editor, that I do not run a "Growlery," and these are only "suggestions," and wherever the advertising pages may be placed I shall anxiously look each week for the safe arrival of my good old friend, the AMERICAN BEE JOURNAL, at Wagon Works, Toledo, O.

Jan. 5, 1883. DR. A. B. MASON.

Being satisfied that a "cover" for the Weekly BEE JOURNAL was a thing to be desired, at the beginning of the volume for 1882 we adopted that plan; but several who had become familiar with seeing the editorial matter commence on that page, sent in their "protest," and, as above indicated, we changed the "make up" to suit them—but never changed our mind on the subject—though we try to please as many of our patrons as possible, whether we please ourself or not.

We hardly know now what to do, to test the matter: suppose we give from now till February 1st, to all those who want to "protest" against the change as suggested by Dr. Mason, to do so—and also for "approvals" of the present "make up." In this way we can "put it to vote"—and if we let the readers decide, the majority will "carry the motion," and the minority must be "satisfied." We are willing to do whatever our readers decide—and this is about the only way we can determine the matter. Reader, which way do you vote?

◆

Mr. I. R. Good's Apiary.

The Nappanee, Ind., *News*, thus notices one of the industries of that town, the proprietor of which is well known to our readers:

OUR APIARY.—It is with pleasure that we notice this branch of our industries. It is owned by our neighbor, Mr. I. R. Good, who commenced in the business a few years ago, with a few colonies as an experiment, without any knowledge of the business. But in those few years, by close attention and posting himself, he has again proven the fact that an industrious specialist will always succeed, as his report for this season will show that bee culture will pay. Mr. Good has also become a rearer of the different kinds of queens, in the past year, and has had the best of success in sending them to his many customers in different parts of the United States and Canada, with comparatively no loss, through the mails, with his "Good" candy, as the different bee papers call it, which he makes himself; and from the many compliments he receives, it must be appropriately named.

He expects to be more able to supply his customers the coming season than ever. His report for the season, just closed, shows the following: Commenced the season with 145 colonies, and sold $1,000 worth of bees and queens. Had over 2,000 pounds of honey. He has in winter quarters 225 strong colonies. We think this rather a good showing, and hope the same success will attend Mr. Good in the future, and we do not hesitate to say that those who deal with him will find him as appropriately named as his bee feed.

◆

☞ We have a few copies of our pamphlet entitled "*Bee Culture*" left, and have reduced the price from 40 to 25 cents each, or $2 per dozen.

Do Bees Injure Fruit.

We have long tried to believe that they do not, but the following august authority traveling the rounds of the press, is conclusive evidence:

We once told Mr. Frederick Wilhelm Henerich Whokendemffeschauferponsky, a whole-souled Dutchman of our acquaintance, that bees did not injure fruit at all, when he pitched in and said he knew better, and gave the best argument we ever heard, that bees do injure fruit, in the following words:

"Vounce a long vile ago, ven I first to dis coundry gome, I vent into mine abble orchard to glime a bear dree to kit some beaches to make mine vrow a blum budding mit; und ven I kits avay up on de tobbermost limbs, a hole lot of pees, pees vot gome for honey gitten—dwo, dree five thousand of 'em gome ven I vas on de highermost pranches, und tey schting me all over so pad as never vas, und right pefore mine vace, too, und I not know vere I am, so I vall town from de lowermost limbs vay so high up, mit von leg on both sides of de bicket vence, und like to stove my outsides in. Vat you say, hey! pees no steal de fruit, ven I ketch 'em at it?"

We do not like to gainsay or resist such positive, convincing facts. We think the entire question may now rest without a quibble on this presentation of the case; it is so pure in language, thought and style, that it should be accepted as a model.

◆

Honey and Beeswax in Russia.—The *Pall Mall Gazette*, of London, England gives the following on the results of unfair competition of beeswax with ceresin, in Russia, and its effect upon bee-culture in that country:

Among the latest victims of foreign competition are the bees of Russia. Under the influence of the free importation of a spurious kind of wax called ceresina, manufactured in Austria, the native industry is dwindling at a rate which threatens it with extinction. Of ceresina, which bears the same relation to genuine wax that oleomargarine does to dairy butter, no less than 1,000,000 pounds are annually imported, chiefly for use in the manufacture of tapers, which figure so prominently in all Russian churches. The price of wax has fallen under stress of competition with ceresina from 30 to 17 roubles per pound. At this price bees are regarded as hardly worth their keep, and in one district the honey crop has fallen from 15,000 to 6,000 pounds per annum. By the new tariff an import duty of a rouble a pound has been imposed on ceresina; but, according to the *Moscow Gazette*, it will have to be raised to 10 roubles to give the poor bees a chance.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

The Markets for Honey.

We have, for a long time, advocated the plan of bringing the producer and seller of honey into a closer bond of union. This would, if carried out to its fullest extent, no doubt, be found greatly to the advantage of the honey-producer, for this reason. Those more likely to understand the demands of consumers are those who are brought into contact with them most; and when settling upon a plan of marketing our crop, nothing could be more advantageous than to have the consumer, the merchant, and the producer all in perfect accord. The consumer to determine what is the most captivating and attractive, the merchant to ascertain the best packages to handle and sell, and the producer to decide upon the best plan to meet the views of the merchant and consumer.

Last summer, we noted the fact that the merchants were now reaching out after the most desirable crops of honey, and that Messrs. Thurber & Co., of New York, and Messrs. Crocker & Blake, of Boston, and others, were in search of fancy articles of honey, and that Mr. Ripley, of the latter firm, had given us a call, to enquire after some of the larger producers of honey. We were very much pleased with Mr. Ripley and his mission, and did all we could to forward it. We have just receiyed the following letter from him, which gives his views of the honey market and will interest our readers:

THOS. G. NEWMAN, ESQ.—*Dear Sir:* It has been my earnest desire to write and thank you for the many courtesies that I enjoyed at your hands when in Chicago and Toledo, but we have had a good business, and that, to-day, means hard, honest work, and we have devoted ourselves to it to the best of our ability, and neglected you. I will endeavor to atone for past neglect. I have read, with great interest, the honey reports in your valuable journal, and the notice of my being in the West, which you kindly gave me, gave me an acquaintance with the bee-keepers of the country that we never dreamed of proving to us what our personal acquaintance has always shown, that bee-keepers, as a class, are ready and anxious to know anything that will improve their bees or bring them a higher price for their honey, and to accomplish that, what should they do? Subscribe to the Weekly BEE JOURNAL. As soon should a sailor go to sea without a compass, an astronomer be without a telescope, as a bee-keeper without the AMERICAN BEE JOURNAL.

We have had large consignments of comb honey from the West, and from New York, and, from letters we have received, know that our consignors are well pleased with their Boston venture. We have had all of J. E. Crane's honey, of Middleburg, Vt., and it has all sold well. In our judgment, it is not well to put the price of any article too high; it drives trade away and it takes one season to make it popular again. We have noted, with anxiety, the discussion about the half-pound section, and find that the demand is credited to come from Boston, and we want to set ourselves right with producers in the matter.

In the first place, we want it distinctly understood that we do *not* advise any one to use the half-pound section exclusively. Mr. F. C. Benedict expresses our views on the subject perfectly in your issue of Jan. 3. No producer can afford to use half-pound sections exclusively. One-pound sections are small enough to please 95 out of 100, and producers must respond in this proportion. We sold J. C. Newman & Sons, W. S. Benedict and F. C. Benedict's half-pound sections, and rendered 30 cents per pound for all, and could have sold more, but the demand is limited.

Some dealers say they are too small; others say, one-pound sections are too small, and it is only for the variety that we may sell every man who comes along and wants honey.

Our demand for extracted honey is limited, and we are not able to get over 10c. per pound. Our demand for honey is falling off, and our advice to all is to market your honey early, be the crop large or small. What we mean by early is, before January 1.

Yours Respectfully,
FRANK L. RIPLEY,
of Crocker & Blake.

BOSTON, MASS., Jan. 6, 1883.

Honey in the Rocks.

The Baltimore *Sun*, gives the following, to illustrate the provident sagacity of bees. It says that in the mountains of old Virginia there is a mammoth natural bee hive, and that a lot of courageous youths captured the fort, killed the inhabitants and plundered the stronghold. It is a fine story, but lacks confirmation, and should be strongly doubted, unless more evidence is produced than that given by the reporter of the *Sun*. But here is the item.

Bee-trees are found widely scattered through the woods, and honey hunters make a business of felling trees, to which they trace the flight of bees. But now bee-rocks are being found where, in broad horizontal clefts, these industrious insects have for years been adding swarm to swarm, and accumulating vast yearly surplus stores of honey. The cells being hermetically sealed, the fluid never crystallizes: and floral bee pasture so abounds from February to December that not half the winter stores are consumed before spring flowers cover the heather and invite the bees to feast on fresher sippings. The over-provident workers make no account of accumulations, but go on storing the same over-supplies year after year—a rare instance of Imperfect sagacity.

For fifteen years people have observed bees flying towards the highest peak of the Butte mountain summit, 2,000 feet above their camp in Tehama county. They called it the mammoth bee hive. In October, a party of courageous youths undertook to climb the rocky ascent and make a raid on the great hive. They found what they expected, and proceeded to drill holes and blow up the rock. Instantly they were enveloped in a dense cloud of bees. Stung in every part, inside their underclothes included, they fled in dismay, and spent the night in repairing damages and preparing to renew the onslaught on the morrow, when, after a battle of three hours, they achieved a victory and captured the stronghold. The dead bees would have filled several grain sacks. The plunder consisted of one solid mass of honey in the comb, 5 feet long by 2½ feet by 3 feet in depth.

What Bees do in Georgia.

The Monroe, Ga., *Advertiser* gives the following account of an interview had by its reporter, with Mr. Wilder, a bee-keeper of that locality:

"How is your apiary coming on?" we asked Mr. Frank Wilder.

"My bees ares getting on nicely but they have not gathered honey to amount to anything in the last few weeks. The storm of the ninth of September seemed to stop the honey flow in some way or the other. At any rate my bees have not obtained much honey since then."

"Have you sold many bees this year?"

"Not a great many bees, but quantities of honey. I have made enough on my apiary to pay the provision bill of my family this year, and also the expenses of my farm."

We expressed surprise at this statement, but Mr. Wilder assured us it is a fact. "What is the biggest yield you have had this year from a hive?"

"I have one hive, from which I obtained three hundred and fifty pounds. I would not take $50 for that colony. That is the biggest yield I ever heard of, except in one case. There is a man in Texas who reports seven hundred pounds as the product of one colony in one year. That is enormous and I never heard the like before."

"I have now fifty hives," continued Mr. Wilder, "and I cannot attend to them and do my other business. I believe I lost a thousand pounds of honey in September, by not being able to attend to the bees when they needed it. I intend to bring out a young man from Ohio next spring—if I can get the right sort of one—and put him in charge of my apiary; I am satisfied that I can make a deal of money by it."

CORRESPONDENCE

For the American Bee Journal.

Bee Be-ing Busy.

I love to see the active bee,
  I love to watch the hive ;
When sun is hot, it lingers not,
  But seems the more alive.

'Mid summer heat the honey sweet,
  It gathers while it may ;
In tiny drops nor ever stops,
  To dally time in play.

From sundry lands with various bands,]
  Steady to instinct true ;
Slight varied task or odds of haste,
  It keeps one end in view.}

With right good will and wond'rous skill,
  It doth to work attend ;
Each little cell is shaped so well,
  That none its work could mend.

I hear it come, I love its hum,
  Flying from flower to flower ;
While to its store a little more,
  Adding from hour to hour.

Example bright, its happy flight,
  Presents to all around ;
This lesson good if understood,
  Is in its habits found.

Just so should I myself employ,
  My proper work to mind ;
Look for some sweet in all I meet,
  And store up all I find.

Toronto, Canada. S.

For the American Bee Journal.

Who Shall Keep Bees?

DR. C. C. MILLER, 174-202.

Before me lies a letter from one who says: "As I have been troubled with an inflammation of the lungs for many years, I have been advised by prominent physicians to abandon my profession and work on a farm. But as I am no farmer and would be unable to earn my living on a farm, I thought I would ask you, as an expert in this line, if it would be profitable to invest in an apiary, where to get the best bees," etc., etc.

It is painful to think that to this and similar inquiries we can give no reply that we can feel sure may not mislead. To 9 out of 10 of every such persons it would be a real kindness to dissuade with all our power, while, perhaps, 1 out of 20, or 50, might be urged to embark in apistical pursuits to the abandonment of all others. But it is no easy matter to determine who may be the 20th or 50th one, hence it is a very difficult matter to give any honest advice without an intimate acquaintance with all the circumstances of the inquirer. I have blamed the editors of our bee papers in that the drift of the contents of such papers was to show the bright side only of bee-keeping, thus inducing into the business many not adapted to it, much to their after regret.

But I am not sure that the papers are at all to blame. All they can do is to publish such items of information as come within their reach, and most of us like much better to send in reports of our sucesses than of our failures. It is quite flattering to my vanity to report: "I have, this year, commenced with 174 colonies, increased to 202, and taken over 8 tons of comb honey." Would I be as prompt to send in a report like the following: "This year I devoted my time exclusively to bees, commenced the season with 200 or more colonies; diminished by loss and doubling up, so that I had 162 colonies in the fall, and took, in all, 58 pounds of honey. By means of the business I am $1,000 poorer than I was a year ago." Would the latter report be as much noticed and copied as the former? The former is a correct report of my success this year. The latter is just as correct a report of my failure two years previous, and I have no assurance that I may not have a similar report to make the coming year. In view of such possibilities, it is safe to advise that no one should go into bee-keeping, and give up all other business, until he has saved up enough ahead to support him at least one year without any income.

But suppose I hear of one who makes a success of bee-keeping, year after year, with never a failure, who has made thousands of dollars at it. Do I not hear of others who have made many more thousands in other pursuits? Shall I, then, give up bees and adopt the other pursuit? But you say, "It takes capital in other business and one can make a start with only a single colony, of bees." Yes, you can make a *start* but you cannot make a living with a single colony, and with the price of it you can also make a *start* in merchandise, and, within a week, a friend was telling me of an acquaintance in New York whose net income from merchandising, the previous year, was a third of a million. "Oh yes," you say, "but the merchant had years of preparation, and special talent in his line of business."

Now, if you think no preparation and no special talent is needed to succeed with bees, you are decidedly in error. It is true, you can invest in bees to the extent of your capital, with no knowledge of the business, and so you can in merchandise, with a probability of losing in one as well as the other. As we are talking confidentially, I do not mind giving you a bit of my own experience. I am by no means as successful as many others, yet for the past more than 20 years I have been studying up the business, practicing and experimenting as much as I could whilst in other business; reading all the books and papers I could get about bee-keeping, and through all those years lying awake many a night, hour after hour, studying up plans for better success in the apiary. I have not yet reached that point where unsolved problems in bee culture are not plenty enough to baffle me. I am quite inclined to believe that those who have been the most successful in bee culture, if they had used their ability with the same enthusiasm in any other pursuit, would not fail of success in that pursuit. In my own case, so far as financial success is concerned, I think I should be better off in this world's goods to-day if I had never kept bees. During the few years in which I have made it my exclusive business, I have made far less money than I did at other business in the same number of years previous. But, with my present views, I prefer it to any other business, because I can live in the country, be out-doors, have better health, be much of the time with my family, and I do not know of any other business I like so well. There is hard work in it, in spite of all that is said about it being nice for feeble invalids. The man that takes care of enough bees to make a living, will find he earns his bread by the sweat of his brow.

After all I have said, there are some who will find bee-keeping the most desirable of all pursuits. If you find it has so much fascination for you that you can take delight in lying awake nights studying about it, that you can stoically take the stings, even if they do sometimes wrench from you a groan; that you can come in at night during the busy season wet with sweat from head to foot and so tired that you ache all over, and not feel disheartened, and have, withal, tact and talent enough to conquer difficulties as they arise, then get the best weekly bee paper and if you can get some monthlies all the better; get a small number of colonies and grow into the business, or, better still, serve an apprenticeship with some practical bee-keeper and gain in one year the experience of many. Other questions as to kinds of bees, etc., you will find fully discussed in the papers and books (do not forget to get a good book), and I need not take time with them here. My chief aim has been to show some phases of the subject not generally dwelt upon.

Marengo, Ill.

For the American Bee Journal.

The New Small Sections.

DR. G. L. TINKER.

Since sending you the article on the half-pound section I have received a letter from Mr. Manum on the subject and he thinks a section 3¾x3¾x1⅜ will hold over one-half pound and that it should hold a little less than one-half pound, if anything, to suit the dealers. I then made little boxes to hold about the amount of comb honey that would be built in the several sizes given below, allowing one-fourth inch for passage ways on three sides of the comb, and, after filling and weighing, found that the size 3¾x3¾x1⅜ would hold about 8½ ounces, the size 3½x3½x1⅜, 7½ ounces, and the size 3⅝x3⅝x1⅜ would hold just the one-half pound. Each size includes the weight of the section, which is about half an ounce.

I think that the section should weigh as nearly the half-pound as possible, and would therefore think it best to change the figures in the article to read, 3⅝x3⅝x1⅜.

The size 3¾ I sent you a sample of is as small as will look well, but the ⅛ off will not make much difference in looks. I first made two sizes, 3½x3½x1⅜ and the one sent to you. I found the former a little too small and the latter a little too large, but thought it better to be as large as possible on account of the looks even though it would weigh a plump half-pound.

I have just read Mr. Heddon's article and find that he takes quite the same view that I do about the half-pound sections being 2 inches thick. If reduced to a size to hold just one-half pound the honey would not look well in any shape that it could be made, either in the section or cut out on the table.

New Philadelphia, O., Jan. 5, 1883.

For the American Bee Journal.

Northern Michigan Convention.

Robertson's Hall, Pewamo, Michigan, Oct. 10, 1882.—One o'clock p. m. The fifth annual Northern Michigan Bee-Keepers' Convention was called to order, and, in the absence of President Roop, Vice President George W. Stanton, was called to the chair. Roll of members called and a fair number answered to the call.

The annual reports of the secretary and treasurer were read and adopted as read.

Verbal reports were made by vice-presidents, Geo. W. Stanton, W. S. Pierson and J. H. Robertson, no others being present. President Roop, not being present, and no report being on hand, his report was passed for the time.

The minutes of the last meeting were read by the secretary and enrollment of new members was taken, enumerating thirteen at the opening. A recess was taken, after which it was resolved that the election of officers be postponed until, and made a special order of business to-morrow, at 10 a. m. J. H. Robertson drew up a list of subjects for discussion which was submitted and adopted.

The first subject was opened by J. H. Robertson, upon the "Best Race of Bees," who approved of home-bred Italians, and that hybrids were not objectionable as workers. He had reared from 300 to 400 queens this season, from home-bred queens of imported mothers; he has some Holy-land bees, but sees no advantage in their introduction; has seen the Cyprian bees at Prof. A. J. Cook's, at Lansing, and, from what he saw of them, he thinks that they are bad to sting and are irritable. He thinks he has secured a good strain of bees from home-bred queens, especially strong to endure our winters.

O. R. Goodno spoke of his results with blacks, hybrids and Italians; he has always had the best results from hybrids; he avoids breeding black queens, but an Italian queen that produces hybrids is not objectionable. Has had the Cyprian and Hungarian bees, but too late in the season to test them and they died that winter.

Mrs. A. M. Sanders' experience was favorable toward hybrids. She bought two colonies of Italians and two of blacks, and her hybrids did the best. From one colony of hybrids she had secured four crates of honey, 40 lbs. each, and one swarm, and from the swarm she had one crate of honey. She has no pure Italians now.

Mr. Robertson, in regard to the disposition of bees, says he has had just as cross pure Italians as he ever did hybrids.

W. S. Pierson had no experience with the new races of bees, but is of the impression that Cyprians are more cross than the blacks. He finds advantage in the Italians clustering on combs much better than the blacks, and concludes that Italians are good enough for him.

O. R. Goodno said he could subdue any colony with a good smoker, so that it will remember it and be submissive to handle afterwards. That was his experience two years ago with his best hybrid colony, and again this year, and he sees no injurious results from subduing them.

Mr. Robertson prefers the American bred queens. He does not keep queens over two years, unless they are of extra quality.

Mrs. Sanders had a queen over 4 years old, and considered her good yet.

Mr. Robertson thinks that in many cases where there is a queen 4 years or more old, there is another queen in the same hive, as he has found several instances where two queens occupied the same hive.

Mr. Robertson moved that it be the sense of this meeting that we rest content with Italian bees without the introduction of other races. Carried.

The next subject was "How To Breed Them," and was opened by Mr. Robertson upon his method of rearing queens. He gave the following plan: First, select the best colonies to breed from, remove one or more frames from the center of the hive and insert new combs or cards of foundation for the queens to lay in, and when full of eggs, he selected other strong colonies from which he took all unsealed larva and the queens, and, after eggs had been laid in the new combs, from which he wished to rear queens, in 4 days he cut off about one inch from the entire bottom of the new comb and passed his knife blade down through the sides of the comb and inserted the card in the middle of the hive, which he had prepared to rear the cells in, and from 60 to 70 cells would be started, and after 4 days he sorted out the best cells, not leaving more than from 8 to 12, at the most. of the cells, and the bees would carry the royal jelly from those destroyed to those retained, and those queens would hatch in 16 days from time the card was inserted; sometimes in 15 days. He would remove this card containing the ripe queen cells to his lamp nursery at 15 or 16 days, as the weather might be, and prepare nuclei, at same time, to receive the queens, and as fast as hatched he introduced queens to them; and where queens were not wanted sufficient to require a lamp nursery, he described how he made a wire frame that would go inside the hive to receive the card containing the cells; brushing off all the bees and inserting the same in the wire frame. This being in the center of the hive would receive the proper temperature the queens should have to hatch; and with this frame in the middle of the hive, the sides could be covered with separate quilts and a woolen blanket over the wire frame, it could be visited without disturbing the bees in the hive, and, as the queens hatched, be removed to nuclei.

After Mr. Robertson's interesting description as to how to rear queens, it was agreed to adopt and try it next season. The convention then adjourned until 7 p. m.

At 7 p. m. the convention was called to order by Vice President Stanton. The first subject in order was "The Best Frame for all Purposes, Including the Hive."

Mr. Robertson spoke in favor of the Langstroth frame and against the Galup and advanced the theory that, for wintering, bees on the Langstroth frame worked their way from end to end of the frames, and, in a long continued cold spell in winter, did not have to move from frame to frame as they did in shorter frames, but only move along on the same; and for shipping, he liked them much the best.

Mr. Goodno has both deep and shallow frames in use, and much prefers the deep to the shallow ones, for convenience in handling, and for wintering, with a stick under the quilt to form a passage way, and prefers 3 pieces of bent hoop under the quilt to a straight stick, which has always served as passage ways for bees to pass from one comb to the other. All the Langstroth hives he bad seen have a closed bottom board, which he dislikes, for many reasons. One is, in spring, when set out, he likes to clean out under the frames, and, with a movable bottom board, he can replace it with a clean, dry one, which is better than the old one; and with a movable bottom board any hive may be used as a second story, while without, you must have an extra set of upper stories. In very hot weather, in summer, he has had bees cluster outside, so as to cover one end and side two inches deep with bees, and if it had a movable bottom board he could raise one side, the east side is his choice where they face the south; by giving them ventilation they will at once go to work in racks, upper stories, or wherever he wishes them to.

W. S. Pierson has experimented with several different hives, has bought American and improved Langstroths; has tried the latter 2 seasons and cannot say he likes it and never will make any more; he likes a hive best similar to Mr. Roop's.

Mrs. B. Chapman inquires how to prevent moths from getting into hives? That they got in her black colonies. Answered by Mr. Robertson, that moths would not trouble Italians and if they were kept strong they would drive them out. Mrs. Chapman keeps but few bees and uses a deep frame and likes it, only lost a few bees a year ago last winter, and wintered on deep frames.

C. S. Wolcott likes a medium frame similar to Mr. Doolittle's.

Mr. C. Case favors deep frames; wintered successfully in 1880-1 in deep frames.

Mr. Goodno likes deep short frames, and wants the entrance in the end of the hive, with frames crosswise, and thinks them more convenient to close up weak colonies in the spring with division boards, and with frames crosswise of the hive, each acts as a division for the wind and cold that comes in at the entrance, while, with a long frame, running lengthwise, any cold that goes in at the entrance will go through to the back end.

Mr. Robertson has no weak colonies in the spring, he draws from the strong ones and keeps them all strong; any queen who cannot keep her colony from dwindling in spring is not worth a cent.

Mr. Goodno has a queen which has done well this season, that was doubled up a year ago last spring. Six weak ones put into the 7th and this is the original queen that was in the 7th hive, and after they were doubled a week or ten days they were no stronger than the original colony.

Mrs. Sanders has had similar experience with queens that allowed their colonies to dwindle in the spring and afterward proved to be prolific. She has both square and long frames, and likes the square frames best; still, this year, she has had the best results from the Langstroth frame; but they were her best bees. She has wintered bees in both, and has no choice.

The frames used by the members present are as follows. It was agreed to let the results be shown, another year.

	Size of Frame.	No. of Col.
George W. Stanton, Sheridan	11x12	51
Mrs. A. M. Sanders, "	11x12	50
" " "	Lang	30
Miss F. A. Bellamy, Ionia	"	18
B. Chapman, South Boston	"	5
Henry Jones, Chesaning	"	31
I. A. Balch, Lyons	square	28
" " "	Lang	42
Orren Martin, Carson City	10x10	65
O. R. Goodno, "	10x10	46
" "	Lang	16
Day Spaulding, Pewamo	11x11¼	14
H. Peck, Saranac	11x11¼	24
R. B. Corriss, St. Johns	11x11¼	5
Byron Wightman, Sheridan	11x12	5
W. S. Pierson, Eureka	11x11¼	70
G. M. Barney, Carson City	10x10	66
Jacob Bessey, Ionia	Lang	29
B. Osborn, St. Johns	11x12	90
Henry A. Rogers, Orange	Lang	15

Do not know how many of each, or how many in all Mr. J. H. Robertson has, and at a later date, Dec. 6th, the secretary has still been unable to obtain the above information from Mr. Robertson.

Seven hundred colonies were represented at the convention; of which 186 were in Langstroth hives and 514 in square or deep frames. Under the circumstances that there was such a variety of frames represented by the members present, no frame could be unanimously adopted by this convention.

Wednesday, Oct. 11, 1882, 10 a. m., the convention was called to order. President Roop still being absent, and Vice President Stanton being called away, Vice President J. H. Robertson took the chair. The hour having arrived at which the election of officers was to be taken up, it was resolved to elect by acclamation. George W. Stanton, of Sheridan, was elected president for the ensuing year. The following Vice Presidents were nominated and elected. 1st Vice President, Francito A. Palmer, of McBride; 2nd, L. S. Benham, Alma; 3rd, C. S. Wolcott, St. Johns; 4th, Frank Gleason, Lyons; 5th, Miss F. A. Bellamy, Ionia. It was resolved that the office of secretary and treasurer be embodied in one. O. R. Goodno, of Carson City, was elected secretary and treasurer for the ensuing year.

The convention waived the order of discussion and listened to an interesting speech from a Mr. James H. Eaton, of Bluffton, Allen Co., Ohio, who had come some miles out of his way to attend the convention and could stay but a short time. He gave us some very interesting ideas upon foul brood, and that the use of rock salt was a good, if not an effectual, remedy for the same; to be given to the bees where they could have free access to it, and that rock salt was better than any other, being more pure, and when used no bees were effected by foul brood. We all regretted his short stay as much more might have been learned from him.

"Prospects of Bee-Keeping" was the next subject taken up. Mr. Robertson said that we had encouraging prospects for the future; our honey was being sought for, and purchasers come to us to buy, while in the past we had to find our market ourselves; honey was being used by many families who had not heretofore used it, and he advocated extracted honey to be put up in 50 or 100 lb. kegs, and that his orders are increasing for that sort of package; he had no honey on hand, so great was the demand for such packages. He had realized $10.50 for 100 lb. packages, and $6.50 for 50 lb. packages.

W. S. Pierson said that at these meeting was the place to learn how to put up our honey and how to market it, and all should labor to drive out the cheap honey and all try to get honey up in better shape, whether it be extracted or comb. He has been engaged in the business several years and tries to produce good honey and has been able to sell his extracted at 15 cts.; he thinks we ought to make it a point to place honey, implements, and every thing used in our business, on exhibition at conventions, that we may compare, note, and profit thereby. Let each one bring the plants of his section that produce honey.

O. R. Goodno had found new and desirable market for his extracted honey to be used in the manufacture of tobacco, and, if it proved successful, would be used to a great extent in the place of glycerine which cost the manufacturer of tobacco 28 cts. per lb., while the honey, at, say 10 cts., which would be much more profitable, as it retains its weight while being manufactured, and being double or treble its cost after being placed in the goods, cannot help being more profitable to the consumers of the tobacco. Also inquiries are being made for extracted honey to sweeten grape wine, and, if it produces the flavor anticipated, they will be able to use all the honey that Michigan can produce. He thinks that in the near future, extracted honey will be what all will try to produce, and that the prospects never were better for bee-keepers than at present.

The subject of "Wintering" was then taken up. Mr. Robertson, anticipating a severe, cold winter, advocates cutting down or doubling up and make all colonies strong. He winters in the cellar and looks after the bees every day during winter, and has water in cellar all the while, and all his bees have to winter on is June or July honey; but little or no fall honey.

Mr. Goodno gave his method of chaff packing, but should try wintering both in and out of doors. He thought bees, as a general thing, were in good condition for wintering; all preparation for wintering ought to have been made by this, though his had not been prepared as yet.

As several of the members were soon obliged to leave on the train to reach home on the same day, and desiring to know where the next convention would be held, it was voted that the next convention be held at Sheridan, Montcalm Co., Mich., on the second Tuesday and Wednesday of October, 1883.

Further, on preparing bees for winter. Mr. Goodno does not like to have bees disturbed after this date.

Mr. C. Case gave his method, and said his bees were already prepared for winter; he puts them in cellar early, and crowds the combs so closely that the honey cannot granulate, owing to the warmth of the bees.

Mr. Pierson had some bees already prepared in chaff for winter. No one doubted but what all bees should be prepared early for winter.

"Best Method of Securing a Large Crop of Honey, Weather Permitting." Mr. N. S. Pierson had been rearing bees many years and had invested in several patent hives, but all have been too complicated, and worthless. Since the invention of the extractor some have tried to extract all the honey the bees made, and it has given the extractor a bad name. The extractor is all right in its place, but do not rob the bees; give them a plenty, and, before extracting, let the bees cap at least two-thirds of the comb. He had 43 colonies this spring, and ran 8 of them for extracted honey and got 657 lbs.; found 2 upper stories with brood in them, and made colonies of them. He obtained in all 2,000 lbs. of honey.

Others spoke upon the subject but nothing practical was brought out. The convention took a recess for dinner.

At 1 p. m. the convention was called to order by Vice Pres. J. H. Robertson, Pres. Roop not having appeared. L. S. Benham, of Alma, Mich., sent in his report for the year, with regrets that he could not attend, which was as follows: Spring count 28, increase 43, queens reared 75, honey extracted 1,800 lbs., honey in comb 200 lbs.

Mrs. A. M. Sanders, of Sheridan, Mich., reported as follows: I had 50 colonies in the spring and sold one, leaving 49 for the summer's work; I increased to 80 and obtained 3,000 lbs.

of comb honey, mostly white, and 500 lbs. extracted. I worked my bees on Mr. Doolittle's plan of spreading the brood and stimulating with uncapped honey in the spring. It was very late in the season before I could safely disturb the brood combs, but when raspberries were in bloom, the hives were crowded with brood and bees and they went immediately into the crates. We had no basswood and at no time during this season has there been a flow of honey, but they got enough from clover to keep them at work in the crates until the buckwheat bloomed; the fall run lasted about 10 days. Mrs. Sanders has invented a bee-feeder which met with favor by all present. It is hoped that she will put it in use and give us further reports.

Mr. Goodno reported that he had 25 colonies in the yard in spring, increased by early nuclei 13; natural swarms 1; bought 16 colonies in August, set up 5 nuclei on Sept. 16, for experiment, other parties added 2 colonies, late in fall, to the yard, so there are 62 hives with bees in under my care, and have secured 2,000 lbs. of honey, really from the 25 colonies in the spring.

Mr. Robertson gave his plan of working bees in upper stories, by taking 2 cards from the lower story and placing in the second story, filling the lower with foundation, and then extracting from upper story. He strongly advocated extracted, instead of comb honey, which is demonstrated by the fact that he has not secured a single crate of comb honey this season.

G. M. Barney reported his success, starting with 34 colonies in the spring and increased to 66; had many more swarms but put them back; he could have had 100 colonies had he not put the swarms back; had secured 30 crates of comb honey, which would average 30 lbs. each and 2 bbls. of extracted honey.

The question drawer was then opened. The first question was "The Best Method of Rearing Queens," asked by some one who was not present at the time Mr. Robertson gave his plan. As there might be others present who did not hear his explanation, he gave it again, which was appreciated by all present.

Second question: "What Will be the best Method of Marketing our Surplus Honey in Future?" was replied to by Mr. Goodno by referring to the openings lately found and by exhausting our home market first, which is yearly increasing.

Third question: "Wintering Bees by Burying in the Ground." Replied to by Mr. Robertson, who had much experience in that way, and considered it more expensive than by preparing a cellar, and not so safe a plan.

The hour having nearly arrived at which it was necessary to adjourn, the secretary was requested to make a note of such articles as were placed on exhibition, which consisted of a smoker from Scovell & Anderson, of Columbus, Kas., one each of 3 sizes of T. F. Bingham's smokers, and a fine collection of honey-producing plants exhibited by J. H. Robertson and Isaac A. Balch, including a fair specimen of the noted Simson honey plant, and it was resolved that each member of this society, at the next meeting, bring something in the way of bee-keepers' supplies, honey, honey-plants, wax or fixtures, to place on exhibition.

The convention was liberally attended, there being from 25 to 60 persons present at all its sessions, and our roll gives upward of 20 active members.

Before adjournment it was unanimously resolved, that this convention tender its thanks to Mr. and Mrs. J. H. Robertson, Mr. and Mrs. Isaac A. Balch and others, for their generous hospitality.

Resolved, That the thanks of this convention be extended to Mr. J. H. Robertson for the use of the hall for this meeting.

Adjourned to meet at Sheridan, Montcalm Co., Mich., on the second Tuesday and Wednesday of October, 1883. O. R. GOODNO, *Sec.*

For the American Bee Journal.

Prevention of After-Swarms.

R. DART.

To prevent my bees from casting but one swarm each during the season, has caused me to try about everything recommended in this line of bee-keeping. You advised me, Mr. Editor, last summer, to change hives, giving the old colony a new stand, leaving the new one on the old stand. Out of 19 changed in this way, 4 cast second swarms; the next 10 that swarmed I served in this way: I moved the old colony a few feet from the stand and placed a new hive on the old stand, ran in my swarm, from the swarm-catcher, then drew my frames from the old swarm, shaking them in front of the new hive, thereby getting all the young bees that could not fly out with the swarm, leaving only bees enough in the old colony (say one pint) to protect the brood; set the old hive off on a new stand. Out of ten served in this way, not one cast a second swarm, but became strong and did fine work in the sections.

I do not stop to clip queen-cells, when the first queen is hatched; in 8 days there is not bees enough to send off a second swarm, the other cells are destroyed, and the swarming is over.

You may say this is too much work, but it is only a few minutes' work, and if your other work is driving you, put the old hive to one side and shake out the young bees any time of the day, or next day; it keeps all of the colonies strong and does not reduce them with after swarming, when the young brood is all hatched out.

Another experiment I have tried, with perfect success in this line, is, if you wish no further increase of colonies, when you are shaking out the young bees in front of the new colony, shake them all out, cut out all of the queen-cells, put on the sections, and hive the next swarm in it, and keep on in this way.

I am using the Bailey swarm-catcher. It is quickly placed in position, in front of the hive, at the starting out of the swarm; and in a very few minutes the swarm is all in, ready for hiving. By using the catcher, you can keep your bees from acting cross, through the swarming season. No trees to climb and no limbs to cut off. A swarm-catcher saves more than one-half of the work, if you let bees swarm naturally. We are expected to give our bees care and attention through the swarming season and honey harvest. If we do not, we get but little or nothing in return.

Ripon, Wis., Jan. 5, 1883.

Scott Co., Iowa, Convention.

The Davenport *Democrat* of January 7th contains the following notice of the meeting:

The largest meeting of bee-keepers ever known in this county, was held at the Court House yesterday afternoon. It occurred in pursuance of a small meeting held a fortnight since. Thirty-two persons who are interested in the production of honey as a business were present when the meeting was called to order. After some discussion, it was decided to organize a Society forthwith and elect permanent officers, which the meeting proceeded to do, as follows: President, I. V. McCagg; Vice President, George L. Gast; Secretary, J. J. Nagel; Treasurer, Israel Hall; Executive Committee, Enoch Mead, Ed. R. Wright and Philip Earhart.

A letter from B. F. Little, of Fayette county, was read. In it the writer gave his summer experience with bees, and then strongly urged that the association be organized so as to cover Eastern Iowa, and that meetings be held in different places for the convenience and benefit of members. This letter brought up the question as to whether the society should be a local one or a district one; and at last it was decided to make its jurisdiction local, christen it the Scott County Bee-Keepers' Association, and fix the initiation fee at fifty cents per member. Then the roll of membership was signed by the following named apiarists: I. V. McCagg, Israel Hall, J. J. Nagel, E. R. Wright, John Madden, Enoch Mead, P. Earhart, Geo. L. Gast, Emil Magnus, H. O. Stacy, Wm. Goos, Wm. Gromoll, C. Rock, John D. Fish, Fred T. Fish, Phil. Osborne, R. J. Osborne, N. C. Wilson, Wm. Rigg, John L. Cameron, C. L. Newberry, C. M. Emeis, Joseph W. Churchill, M. A. Collins.

Twenty-four members is a goodly number for a beginning, especially as about every section of the county is represented in the muster-roll. An experience meeting was then in order.

Mr. Phil Osborne made a statement concerning the apiary of Osborne Brothers, at Le Claire. The spring count was 73 colonies, which produced 5,000 pounds of comb honey and 800 pounds of extracted honey. The bees increased to 140 colonies. They winter one-half in the cellar, and the rest on the summer stands, protecting them a little with straw.

Mr. Earhart had 15 colonies in the spring of 1882, and has 40 now. He secured 1,600 pounds of honey.

Mr. J. J. Nagel had 90 colonies last spring, and has 165 now; and the yield of honey has reached 10,000 pounds; half of which is sold and half is on hand, but there is demand for all.

The question was here raised upon the keeping qualities of honey, Mr. Gast and Mr. McCagg both stating honey did not spoil on their hands, but was good from one to three years, which covered their experience, after taking from the hives, or when first gathered.

Mr. E. R. Wright had 70 colonies in spring and 183 in the fall, with a crop of 6,430 pounds of comb honey, in two-pound sections. He favored natural swarming, and winters his bees altogether on summer stands.

Mr. C. M. Emeis stated that he had 41 colonies in the spring, which yielded 1,605 pounds of comb honey. He favored the black bees over the Italian bees.

The secretary was requested to correspond with Mr. Newman, the editor of the Bee Journal, Chicago, for a lecture to be delivered at the next meeting of the association.

The meeting adjourned to Wednesday, February 21st, for a *two days' session*, the object being an exchange of views and getting hold of the best methods of bee culture.

Connecticut Farmer.

Popular Interest in Bee-Keeping.

H. L. JEFFREY.

The interest in bee-keeping is in a growing condition. The meeting of the Connecticut State Board of Agriculture has given by its helping hand an influence to the efforts of the bee-keeping fraternity that is not only an encouragement to try to spread practical information on apiculture.but the movement has inspired hesitating bee-keepers with confidence that the present method adopted by the practical apiarist is not to be classed among the patent humbugs of the many patent hives and impracticable appliances of most of the past thirty years.

The inquiries of the many waking up bee-keepers present plainly showed that the earnest taking up of apicultural pursuits would soon supply the local market with one of the richest and most healthful delicacies of vegetable production. Not only as a delicacy is honey considered in many places but it is used nearly as freely as butter. This one fact shows that before long it may be considered in our own State as much an object of industry and equally as profitable as either the growing of small fruits or any other article of food not considered to be a staple article like flour, meat or potatoes.

Many will doubtless say, I do not believe it. But look at this fact. In 1881 two and one-half tons of honey (not guess work, but actual weight) were produced in a part of Litchfield and Fairfield counties. where in 1880 there was not 250 pounds—that is a marketable article. The yield was more the past season than 1881, and to-day not a pound is left on hand and the demand is yet unsupplied in those localities and in every place I know of the demand is greater than the supply, and as the supply increases the demand also increases in a perceptibly greater degree than the increase.

If those keeping bees do not want to have apiculturists from abroad run in their product and thereby shut out the local producer, if the watchword is to be Nutmegs first, then we Nutmegs must grate out a greater supply than has been grated in the last fifty years. Just let's hear you go to grating immediately and *get all ready* for an early spring beginning.

Woodbury, Conn.

Western Michigan Convention.

The Western Michigan Bee-Keepers' Association met at Supervisors' Hall, Grand Rapids, Nov. 29, 1882, at 1:30 p. m. President W. H. Walker in the chair.

The secretary being absent, L. S. Benham read the minutes of the last meeting, which were approved.

The election of officers for the ensuing year resulted as follows:

President, W. H. Walker, Berlin; Vice Presidents, J. J. Dodge, of Ottawa; T. M. Cobb, of Kent; Silas Remington, of Ionia; George C. Younge, of Muskegon; Treasurer, Mrs. F. S. Covey, of Coopersville; Secretary, F. S. Covey, Coopersville.

On motion of Willson Millard, the meeting discussed the subject of wintering bees. with the view of determining the best methods, out-of-doors or cellars.

Then followed a discussion on the different honey plants; perforated zinc as a division-board, and the width of sections; nearly all agreeing that 1¾ inches would be wide enough where separators are not used.

The discussions on the different subjects were interesting and instructive, but as many could not attend the following day, on account of Thanksgiving, on motion of the secretary, F. M. Cobb was elected delegate to the State convention, and the Association adjourned to meet at the same place in the last week in April, 1883.

F. S. Covey, *Sec.*

Coopersville, Mich.

For the American Bee Journal.

Comb or Extracted Honey.

J. L. STRONG.

This is a question that has interested me for a number of years past, and, although my experience differs somewhat from that of most of my fellow bee-keepers, as to the relative amount of comb and extracted honey produced, never having been able to obtain twice as much extracted as comb honey in a season.

In the season of 1878 I obtained 175 lbs. of extracted honey from one colony, and 98 lbs. of comb from another. The comb honey was sold at 20 cents per lb. and the extracted at 10 cents, making a difference of $6.65 in favor of the extracted honey. The bees had to build their combs in both instances, that being before I used comb foundation, simply using starters of natural comb.

But, with the free use of foundation during the past season, the result has been different. This season I have taken, from one of my best colonies, 199 lbs. of comb honey, and from another colony, worked for extracted honey, I have taken 152 lbs. of extracted and 25 lbs. of comb honey. This, at the present retail price, 20 cents for comb and 15 cents for extracted honey, would make a difference of $12 in favor of the production of comb honey.

Now, admitting the cost of each to be the same, which I think to be about right, when we offset the extra labor of extracting with the cost of sections to hold the comb honey, this is hardly a fair example of the relative amount, for the colony that produced the comb honey was located on the river bottom, with groves of natural trees all around them, covered with honey dew, while the one that produced the extracted honey were located in the town and had to work on white clover or fly over half a mile to reach the timber.

There is one thing that I have noticed, to my great delight, and that is the greatly increasing demand for extracted honey in my home market. I think that the day is not far distant when extracted honey, in its purity, will be a staple article and command as good a price in our home markets as comb honey. To this end all apiarists should labor, and use their utmost influence; for it is so much more desirable to handle, in every way, and is much better for the consumer.

Clarinda, Iowa, Jan. 4, 1883.

For the American Bee Journal

Introducing Queens, Honey Crop, etc.

J. M. A. MILLER.

On the 1st of May last, I had 22 good colonies of Italian bees. In May and June they hardly held their own; on the 1st of July they commenced swarming, and, on the 20th of August I had sold two swarms, retained 8, several had gone to parts unknown, and I had, then, on hand, 56 good colonies.

On July 6, a swarm came out about 9 o'clock a. m. and settled on an apple tree while I was busy getting ready for harvest; at 10, they left; was gone till 12:15 m., when they returned and went into the parent hive. A few days later a swarm came out about noon and settled on an apple tree. While I was preparing a hive (as my supply was now exhausted), they went off. Next day, about the same time, they returned and went into the parent hive. I do not know whether this is an uncommon occurrence or not.

I bought of L. J. Diehl, of Butler, Ind., six dollar queens, which came in good condition. All did well and produced a nice lot of well-marked bees. One queen came about the 10th of July, and was introduced the same day. On August 15 she came off with a large swarm, that filled the hive full.

As there is much said about caging queens, I will state my plan for doing it; first, prepare a phial of some kind of essence, say, peppermint, and odorizer on hand. I take the frames, all or nearly all, out of the hive; or enough to find the queen, dispatch her, odorize all remaining in the hive, if any; and as you place the frames with the accompanying bees, back in the hive, spray them with the odorizer thoroughly, until all are returned to the hive, then spray the queen in like manner, and let her crawl down from the top, among the bees; shut up the hive and put it on the stand, and the job is done. I have never lost one in this way.

My crop of honey this season, from 22 colonies, spring count, is 2,500 lbs.; all comb honey, and all but about 200 pounds in one-pound sections.

I find I can secure fully one-third more honey from a colony facing the north than if facing the south; I find, also, that it makes a great difference what kind of a hive I use. With the Acme hive (my own invention) I can secure at least three times the amount of surplus that I can in the American hive. My hive is two stories, brood-nest below, surplus directly on the top, fitting the lower story nicely. and holding 36 one-pound sections. I have taken as high as 150 one-pound sections of honey from a colony that was a swarm hived as late as June 10 of the same year. Although I am partial to the Italian bee, I am sure the hive has more to do with the amount of honey received, than the kind of bees used, especially if faced to the north.

I winter my bees in the cellar only, and seldom lose any; I give no upward ventilation, all open below, as in the summer. I keep the room as dark as possible, and never disturb them after putting them away in November until the last of March or first of April, as the forwardness of the season may be.

Galva, Ill.

Prairie Farmer.

A Few Practical Suggestions.

MRS. L. HARRISON.

It is well at the close of the year, to review the past, and investigate the causes that led to success or failure of a project. Before undertaking a new venture, a person should be well posted in theory, and better yet, have some practical knowledge of its routine. In conversing lately with a young man who had been engaged several years in the cattle business in the far West, he remarked, "I have paid so dearly for the knowledge I have gained, that I want now to return, and engage in it again, and profit by what I have learned."

A lady once said to the writer, "I have spent $600 during the past summer in the bee business, and have had no returns, and all I have to show for it, is hives filled with foundations, a queen and a handful of bees, and they will all be dead before flowers bloom." This lady had read "Blessed Bees," a charming novelette, snd became infatuated with the business, and was wiser in her own conceit, than old veterans, the recipients of many stings, while engaged in a hotly contested battle with infuriated bees. In Webster's spelling-book of our school-days, we used to read "experience keeps a dear school, but fools will not learn in any other."

The hand should be educated as well as the head, and practical lessons should be given in bee-culture, at all the agricultural colleges, as is now done in Michigan. Girls as well as boys, should be the recipients of instruction in bee-culture, poultry, dairy work, and also in the care of greenhouses, and raising small fruits. Let them choose the one they prefer, and then be taught it theoretically and practically, in all its bearings. Girls educated thus, will develop into independent, self-reliant women, and will never shiver in a city's garret, if misfortunes overtake them.

How often do we meet women, fashionably educated, who cannot earn enough to keep soul and body together. They can play on the piano, embroider, paint china, etc., but cannot produce what is in demand in the world's market. Luxuries are enjoyed by the few, while all seek to obain necessary comforts, such as honey, butter and small fruits, etc. We were at a church fair lately, and looked over the articles for sale, hoping to find something that we needed, but discovered nothing but an iron holder—all fancy, fancy. "All is vanity, saith the preacher." There was plenty of darned lace, and a few mittens, but the backs of them and wrists, were all open work, and would be of little use on a cold day.

One zero day last week, we met on the sidewalk a lady and a little girl, who was a foundling left at her door some five years ago. The lady said, "this child is not old enough to go to school, and I want to give her a chance, so I am taking her to the dancing academy to learn to appear well, for it is all in appearance now-a-days you know."

Peoria, Ill.

Convention Notices.

☞ The annual meeting of the Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association will be held in Temperance Hall, Freeport, Stephenson county, Ill., on January 16 and 17, 1883.

JONATHAN STEWART, *Sec.*

Rock City, Ill.

☞ The Northeastern Ohio and Northwestern Pennsylvania Bee-Keepers' Association will meet at Andover, Ohio, to hold their annual convention, on the second Wednesday and Thursday of February, 1883.

C. T. LEONARD, *Sec.*

☞ The Texas State Bee-Keepers' Association will hold its Fifth Annual Convention at McKinney, Collin Co., on Tuesday and Wednesday, April 17th and 18th, 1883; at the residence of Hon. W. H. Andrews.

The following committees have been appointed, and the programme arranged for the next meeting, by the executive committee; viz: on Resolutions; Apiarian Supplies and Exhibits; Subjects for Discussion; and Arrangements, to receive and entertain those in attendance from abroad.

Programme.—President's Address. Subject—State and National Conventions.

Subjects for general discussion:

Essays.—The "Coming Bee," W. H. Andrews. Honey plants, Native Horsemints, different varieties, Wm. R. Howard. "Extracted vs. Comb Honey," W. K. Marshall, D. D. "Bee-Moth," W. H. Andrews. "The Queen Bee, her nature and habits, Wm. R. Howard. "The different races of bees in America; their relative value to apiculture," W. K. Marshall, D. D.

Other essays are promised, and a general good time is anticipated. Ample arrangements are made to accommodate those from a distance. Those wishing to place anything on exhibition or correspond with the committee of arrangements, will be promptly attended to, by addressing, W. H. Andrews, President, McKinney, Collin Co, Texas. All other correspondence to the Secretary. We would be pleased to have any one propound questions of interest for discussion, as we have found great interest, as well as valuable information gained by the discussion of questions contributed to our "Question Box."

WM. R. HOWARD, *Sec.*

Kingston, Texas.

☞ The annual meeting of the Mahoning Valley Bee-Keepers' Association will be held at Berlin Center, Mahoning Co., O., in the Town Hall on Friday and Saturday the 19th and 20th of January, 1883. All bee-keepers are invited to attend and send essays, papers, implements, or any thing of interest to the fraternity. A full attendance is requested of all who are interested. In fact, the meetings will be so interesting that you cannot afford to miss them. We expect a lecturer from abroad on the evening of the 19th. L. CARSON, *Pres.*

☞ The annual meeting of the Champlain Valley Bee-Keepers' Association will be held at Middleburg, Vt., on Thursday, January 18, 1883, at 10 a. m. T. BROOKINS, *Sec.*

☞ The Southeastern Michigan Bee-Keepers' Association will hold their annual meeting in the court-house at Ann Arbor, Jan. 20, 1883. All are invited. H. D. CUTTING, *Pres.*

G. J. PEASE, *Sec.*, Ann Arbor.

☞ Articles for publication must be written on a separate piece of paper from items of business.

SELECTIONS FROM OUR LETTER BOX

Bees Buried in the Snow.

My bees had a nice flight on November 20, after I had them snugly packed in prairie hay, and they went into winter quarters with an abundance of stores, and, for the past three weeks, they have been under a big snow drift; nearly the entire 11 colonies are covered out of sight. I have adopted the plan of Mrs. Harrison, of Peoria, Ill., and am letting them remain entirely quiet until the warm rays of the spring sun shall call them out. I did not work for honey last season so much as I did for increase of bees, so I only took off a small amount of honey, but as I have mentioned once before I had 11 good healthy colonies ready for winter quarters, from 1, commencing one year ago last August. Our winter, so far, has been very pleasant and favorable for bees, and we hope to see the little fellows come through all right. W. W. EASTMAN.

Yankton, Dakota, Jan. 6, 1883.

Bees Winter Better than Other Stock.

I commenced last spring with 50 colonies; increased to 90, and obtained 3,000 lbs. of honey, one-half extracted, I might have obtained one-third more, could the bees have had full attention. I use the premium section box. After reading James Heddon's article, I think, from my experience, he is nearly right. I find by cutting the premium section box down to 4x5¼x1¾ inches, outside measure, I can use my honey racks without much loss in changing them. My bees seem to be wintering well. I have thus far lost but few in wintering, say about 3 per cent. since I have been keeping bees. I winter them in the barn cellar; have about as much ventilation as I would give a calf or pig, to make them comfortable. I have everything stripped from the brood chamber but the blanket, and pile them up 5 feet deep; in fact, if I could winter my other stock as safely and cheaply as the bees, I would do much better. JOS. WOOD.

Anamosa, Iowa, Jan. 9, 1883.

He Lived with His Bees.

I put into winter quarters 33 colonies; one queen proved to be a worthless drone layer. I lost 2 queens, which gave me 2 queenless and weak colonies, and 20 in fair condition. The season was uncommonly wet and cold up to June 28, at which time "the silver lining of the clouds" made themselves visible, and, at that time, I had the blues in earnest, but when the season had ended and I could count 48 colonies, and over 4,000 lbs. of honey, of which three-fifths at least was comb in 2-lb. sections, I could say from experimental knowledge that honey (especially in large quantities) is good for the blues. I did not get anything like all that could have been taken, for money matters were very close with me, in one sense, but not in the other; I could not quite reach it, therefore my bees were idle, considerable of the time, and then it cost me considerable of honey to ascertain that my drones were not of that kind that actively participated in the building of comb and the sealing up of honey. For my success the past season I want to extend both hands to Mr. Doolittle, for I attribute much of it to his series of articles, which I followed as closely as I could, and the balance to a hard season's work; in fact, as some one as remarked, "I lived with my bees," and I could add that I can do that better than most men, for I have no one else to live with, but, for the fear that it would be taken as an advertisement, I will omit it. I have three objections to the BEE JOURNAL: 1st, it does not come often enough; 2d, there is not enough of it, when it does come; and 3d, when I get it, I have to stop everything else until I have read it. E. F. CASSELL.

Illinois City, Ill., Jan. 9, 1883.

Poor Locality for Bees.

I am located in a very poor section of country for bees. My surplus honey in the comb was 390 lbs., extracted, 110 lbs. The beeswax I have not weighed. I had 10 colonies in the spring, and 29 this fall. Several colonies are short of stores. B. H. WESTLAKE.

Sycamore, Ill., Jan. 10, 1883.

The Past Season's Returns.

Statement of past season's returns from my 116 colonies, spring count: Increase 24, mostly by dividing, and obtained on an average, spring count, 30 lbs. per colony. I have 138 colonies now nicely tucked up in chaff, for their long winter nap. J. M. FRANCE.

Auburn Corners, Pa., Jan. 4, 1883.

From a Lady Bee-Keeper.

From 43 colonies, spring count, we took 4,100 lbs. of honey, about one-half comb honey in 1 and 2-pound sections, and increased to 84, mostly by natural swarming. They are in good condition for wintering. We winter in the cellar and have good success; it is dry and well ventilated. The flow of honey was great, and the amount would have been far greater could they have been run for extracted honey. A great deal is said about tin and wood separators for surplus honey. I use starters and have the hive set *right* and have *no* use for them. S. L. VAIL.

Coal Creek, Iowa, Jan. 7, 1883.

A Good Market for Honey.

I have taken, this poor season, over 3,000 lbs. from less than 30 colonies of bees. I retail at the following prices: White clover comb, in 2-lb. sections, glassed, 25 cts. per lb.; raspberry and golden rod, same; buckwheat, 20 cts. Extracted, of all kinds, 20 cents. I get the sections back again, free of cost. They are kept so clean that they can be used again another season. Honey is very scarce in the city of Troy. I think I may safely say that there is not 500 lbs. outside of my honey in the city. It is very cold here, 5 degrees below zero to-day. My bees, 85 colonies, are in winter quarters, insured for $850 against fire.

Troy, N. Y. G. H. ADAMS.

Amateur's Report.

I am an amateur in bee-keeping. I had 2 good colonies last spring; increased to 5, and obtained 200 lbs. of extracted honey. I sold all I had to spare at 18 cents per lb. I think this is doing well. R. CRAWFORD.

Patterson, N. J., Jan. 6, 1883.

Value of Good Comb Foundation.

In the spring of 1882 I had 5 colonies of Italian bees and obtained from them 25 swarms and about 820 lbs. of surplus honey, all in sections. This gives me 30 good colonies, all in good condition, for winter and spring; every hive being well supplied with honey, bees, and bee-bread. The above result being obtained by supplying every swarm with combs, saved from colonies that I lost in former years, and the above was what convinced me more than anything else, of the value of good comb foundation. C. F. NEUBERT.

Bryant, Iowa, Jan. 6, 1883.

Are Bees Taxable ?

Please answer the following questions through the BEE JOURNAL.—1. Are bees taxable property ? 2. Do assessors generally assess bees ? Last year mine were assessed, while those in other townships were not. D. M. DIERDORFF.

Waterloo, Iowa, Jan. 10, 1883.

[If bees are property of value, there can be no doubt of their being taxable property. However, quite a number of assessors omit them, and hence they are *not* uniformly taxed.—ED.]

An Average of 100 lbs. per Colony.

The year just closed has been favorable to the bee-keepers here. The honey crop has been good, making an average yield of 100 lbs. of extracted honey to the colony in my apiary. The early part of the season of 1882 was very disastrous on account of rains and cold weather in May; many colonies of bees starved and there was an almost total destruction of the brood. But soon after, sweet clover came into bloom, and this, with the honey dews, again gave the bees a start, and they were in good condition when the fall bloom came on and gathered honey rapidly. Bees went into winter quarters in good condition. LEE EMRICK.

Harrisville, Mo., Jan. 10, 1883.

How to use Small Sections.

In reading the various opinions about the best way to get half-pound sections of honey, the thought came into my mind, why not have the comb built in a large frame and capped over ? Then, cut into pieces the right size and shape to exactly fill the section, put them in a frame or case and give them to a good colony of bees to clean up and make fast to the section. This would be no more work than to put the foundation into the sections, and all nice combs of honey could be used up in this way. If I have any sections made for one-half pound, they must be 4¼ one way so they can be put into the same clamp on hives, and the same crate for market—with pound sections. This will save any extra fixtures. The extra amount of labor to get the half-pound section will absorb a large share of the extra receipts. Yours for progressive bee-keeping, L. C. Whiting.

East Saginaw, Mich., Jan. 11, 1883.

Which Race of Bees?

I send you a bee in this letter and would like you to state in the Bee Journal to which race it belongs. I bought a colony last spring from a farmer in a box hive; they are all about this size, some a little thicker. But I do not think they are very good, for they have not obtained any surplus honey since I had them.

Ed. LaSalle.

Champaign, Ill., Jan. 11, 1883.

[The bee was all mashed up and it is difficult to say, yet it looks very much like one of the large brown bees of the South.—Ed.]

Colorado and Bee-Keeping.

I clip the following from Pomeroy's *Democrat*, issued at Denver, Col., Jan. 6, 1883: "The second annual meeting of the Colorado State Bee-Keepers' Association will convene in the rooms of the Horticultural Society, next Saturday, for the purpose of electing officers and the transaction of other important business pertinent to the occasion." Colorado, the youngest commonwealth in the American Union, the centennial State, proudly boasts of her wealth in minerals, yet has leisure to cultivate bees. The *flora* of her mountains and canyons must be utilized, as well as her deep, hidden treasures.

Mrs. L. Harrison.

Peoria, Ill.

My "Bee Business" in 1882.

In April, 1882, I had 61 colonies and by inserting empty combs in center of the hives every few days, I succeeded in getting all colonies very strong by May 1st. But the most precious queen of all in the world to me (my wife) was taken sick at that time, so, of course, the bees were neglected. Many colonies had limited supplies, and, when I stopped feeding and caring for them, they dwindled rapidly. One colony starved to death. My wife died on May 21st, and for a few days after that I still paid no attention to the bees, so, in reality, my bee season began June 1st, with 60 colonies in only ordinary condition. They were not so strong on the last day of May as they were on the last day of April. From June 1st I gave my whole time to the bees and as they had no "gap" in their business, I had no holidays till frost came. I had a great many swarms but "doubled up" persistently all through the season. I hived as many as 6 swarms that clustered together all in one hive, or rather in 3 hives tiered up. By doubling, and tiering up for room, I only increased from 60 to 130. I obtained 2,773 lbs. of comb honey, and 7,402 lbs. of extracted honey, making a total of 10,175 lbs. I only used 30 lbs. of comb foundation and paid $18 for hired help.

C. W. McKown.

Gilson, Ill., Jan. 8, 1883.

Frames across the Entrance.

Mr. Editor:—Please give me your views, through the Bee Journal, on the plan of placing frames crosswise of a hive instead of lengthwise? Where can we obtain half-pound sections? I have my bees packed on a summer stand, in sawdust, and, so far, they are doing splendidly. I see some objection to the Syrian bees on account of their restless disposition. I have one colony of Syrians and I find them quieter than any others. Days that other bees will fly, they remain perfectly quiet.

E. W. Thurston.

Hagerstown, Ind., Dec. 29, 1882.

[The half-pound sections can be obtained of the dealers in apiarian supplies. Within a few weeks you will find many of such, advertised in the Bee Journal.

Some like to have the frames across the entrance, but nearly all bee-keepers prefer the ends to come to the entrance. It is more convenient for the bees coming home loaded to get to the desired place of deposit. It, however, is quite an unimportant matter, and, but for the sake of uniformity, might be subject to the notion of the apiarist.—Ed.]

A Swarm Filled its Hive in 9 Days.

I had 6 colonies in 1881; bought 4; and lost 1 by queenlessness in March. They have increased to 29. Several gave 3 swarms each, and one gave 4 swarms. A swarm that came out on July 18, filled its hive in 9 days. I obtained from them 500 lbs. of honey besides the increase.

D. Watterson.

Roscoe, Ill., Jan. 8, 1883.

The Use of Separators.

Seeing that there is a diversity of opinion in regard to the use of separators, in obtaining comb honey, I will give what little experience I have had in trying to obtain comb honey in marketable shape, without the use of separators. In 1881, I tried two hives without the use of separators. One of them has twenty-four sections filled full of foundation. I got four boxes that could be glassed, the rest of them were either bulged or the comb built into each other so badly that the sections could not be separated without breaking the honey badly. Of the other hive, 27 sections, only 8 could be glassed and fit to be put on the market. In the season of 1882 I had no better success than the year before, so I do not want any more box honey without using separators. I have always used tin separators until the last season. In the spring of 1882 I bought a very nice lot of wooden separators of C. VanEaton, and I believe they are a great improvement. They make the entrances to the boxes larger and the bees enter the boxes more readily, and being wood they are warmer than tin, and the bees will cluster in the sections in cool weather a good deal quicker than they will where metal is used. Such has been my experience during the past season. I shall give them a more thorough trial next season, and shall use the wood separators almost exclusively. L. Dunsmore.

Livonia, N. Y., Jan. 9, 1883.

Feeding in Winter.

Last fall I bought a colony of bees in a bee hive; they did not have much honey and I commenced to feed them. Cold weather came on soon after, and I put them in the cellar; the thermometer standing about 40°. I put some honey over them in the hive, but they do not move around, and their honey is almost gone. Now, how will it do to put them in a warm room?

A Subscriber.

Nashua, N. H., Jan. 9, 1883.

[It might do to put the colony in a room just above the freezing temperature, and feed the bees with some hot syrup made of coffee A sugar. This they will store in convenient cells for use, as they need it.—Ed.]

Another Step Higher.

In reply to that article in the Bee Journal on "Another Advance Step," to prepare young men who desire to become scientific apiarists. For a young man to do this, he should work in the apiary at least three years, in order to qualify himself in all the branches and be able to handle any apiary. I was an apprentice 3 years and have made several mistakes that have cost me from $300 to $500 each, besides coming very near discouraging me in bee culture. If a man wants to qualify in the business he should work under some of the best talent in the country for awhile, and, after that, they should continue to practice and study. Practice is better than all the book learning a man can get. I would not take an apprentice for less than three years, and a man that cannot spend that time should not handle bees at all. It has taken me six years to get where I am, and I consider that I am in advance of my instructor, Mr. J. W. Lindley, who had a large apiary when I commenced and my means were limited. I have 112 colonies of bees in good condition. I advise all to commence business right and they will then know what they are doing.

Chas. Follett.

Osage, Iowa, Jan. 7, 1882.

Advertisements intended for the Bee Journal must reach this office by Saturday of the previous week.

THE AMERICAN BEE JOURNAL

ADVERTISING RATES for 1883.

20 cents per line of space, each insertion,

For either the Weekly or Monthly Editions.

A line of this type will contain *about* 8 words; TWELVE lines will occupy ONE-INCH of space. Transient Advertisements payable in advance. Editorial Notices, 50 cents per line.

SPECIAL RATES.—Advertisements will be inserted in both Weekly and Monthly editions, at the following prices, if wholly paid in advance:

SPACE.	One month	Two mo'ths	Three mo'ths	Six mo'ths	One Year.
1 in. 12 lines	10.00	18.00	25.00	38.00	50.00
2 in. 24 lines	20.00	32.00	40.00	60.00	80.00
3 in. 36 lines	25.00	40.00	50.00	75.00	100.00
4 in. 48 lines	32.00	50.00	65.00	90.00	125.00
5 in. 60 lines	40.00	60.00	75.00	110.00	150.00
6 in. 72 lines	45.00	70.00	90.00	130.00	175.00

For the Weekly alone, 20 per cent. less than the above rates. On yearly advertisements, payments may be made quarterly, but must be in advance.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement *is* inserted.

THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

Special Notices.

☞The American Express Company money order system is the cheapest, safest and most convenient way of remitting small sums of money. Their rates for $1 to $5 are 5 cents; over $5 to $10, 8 cents. They can be purchased at any point where the company have an office, except Canada, and can be made payable at any one of the company's 4,000 offices.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks.

◆

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

◆

☞ Attention is called to our *new* and liberal advertising rates for 1883.

Local Convention Directory.

1883. *Time and Place of Meeting.*

Jan. 16,—N. W. Ill. and S. W. Wis. at Freeport.
J. Stewart, Sec.
18, Chamolain Valley, at Middleburg, Vt.
T. Brookins, Sec.
19, 20.—Mahoning Valley, at Berlin Centre, O.
L. Carson, Pres.
20.—S. W. Mich., at Ann Arbor,
G. J. Pease, Sec., Ann Arbor.
Feb. 3.—Northern Ohio, at Norwalk, O.
8.—Maine State, at Dexter.
Wm. Hoyt, Sec.
14, 15.—N. E. Ohio and N. W. Pa., at Andover
C. T. Leonard, Sec.
March 13.—Lorain Co., at Elyria, Ohio.
O. J. Terrell, Sec., N. Ridgeville, O.
April 5.—Utah, at Salt Lake City.
E. Stevenson, Sec.
17, 18,—Texas State, at McKinney,
Wm. R, Howard, Sec.
May 11.—Iowa Central, at Winterset.
J. E. Pryor, Sec.
—, —Texas State Convention, at McKinney.
Dr. W. R. Howard, Sec.
Sept. 12-14.—Tri-State, at Toledo, Ohio.
Dr. A. B. Mason, Sec., Wagon Works, O.
Oct. 17, 18.—Northwestern, at Chicago, Ill.
Thomas G. Newman, Sec.
9, 10.—Northern Migh. at Sheridan, Mich.
O. R. Goodno, Sec., Carson City, Mich.
Dec. 5-6, Michigan State, at Flint.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

◆

Subscription Credits.—After sending subscriptions to this office, we would respectfully ask every one to look at the label on the wrapper of the next two papers, and there they will find the credit indicated thus: Those who have paid for the first six months of this year will find "June 83" after their names. Those who have paid for the whole year will find "Dec. 83" on their papers. The credit runs to the *end* of the month indicated.

The credit given on THAT LABEL is a sufficient notification of subscriptions due and receipt for payments made. If not so indicated within two weeks after sending money to us, you may be sure something is wrong, and should write to us about it. It will save annoyance and trouble if our subscribers will give this matter due attention.

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

◆

James Vick.—From the appearance of *Vick's Floral Guide*, which is on our desk, we should judge that the young Vicks are "chips of the old block," as the *Floral Guide* with its lithographed cover is handsome enough for the parlor table. It is printed on the best of paper, has three colored plates of flowers and vegetables, and full of useful information. Those who send 10 cents for it cannot be disappointed, as the plates alone are worth the amount. Address, as in past years, JAMES VICK, Rochester, N. Y.

CLUBBING LIST.

We supply the **American Bee Journal** and any of the following periodicals, one year, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage is prepaid by the publishers.

	Publishers' Price.	*Club*
The Weekly Bee Journal,	$2 00..	
and Gleanings in Bee-Culture (A.I.Root)	3 00..	2 75
Bee-Keepers' Magazine (A.J.King).	3 25 .	3 00
Bee-Keepers' Exch'nge (Houk & Peet)	3 00..	2 75
Bee-Keepers' Guide (A.G.Hill)...	2 50..	2 35
Kansas Bee-Keeper........	2 60..	2 40
The 6 above-named papers.......	6 35..	5 50
The Weekly Bee Journal one year and		
Prof. Cook's Manual (bound in cloth)	3 25..	2 75
Bees and Honey, (T. G. Newman) "	2 75..	2 50
Binder for Weekly Bee Journal.....	2 75..	2 50
Apiary Register for 100 colonies	3 50..	3 00
Apiary Register for 200 colonies	4 00..	3 50

The **Monthly Bee Journal** and any of the above, $1 less than the figures in the last column.

◆

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

◆

☞May we ask you, dear reader, to speak a good word for the BEE JOURNAL to neighbors who keep bees, and send on *at least one new* subscription with your own? Our premium, "Bees and Honey," in cloth, for one *new* subscriber to the Weekly, or two for the Monthly, besides your own subscription to either edition, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

◆

☞Postage stamps, of one, two or three cent denomination, accepted for fractional parts of a dollar; but money is preferred.

◆

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

◆

☞Renewals may be made at any time; but all papers are stopped at the expiration of the time paid for, unless requested to be continued.

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1883, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with $6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For four subscribers, with $8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with $10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ The time for the usual winter rush of correspondence is here, and we wish to impress upon all our patrons the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but should be written on separate pieces of paper.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., January 15, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The supply of extracted honey is fully up to the demand. My quotations are: 7c. for dark and 9c. for light, delivered here.

BEESWAX—It is quite scarce. I am paying 27c. for good yellow wax, on arrival; dark and off colors, 17@22c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The demand is good for extracted in barrels as well as in glass jars and tin buckets; arrivals are fair. The demand is fair for comb honey, which, however, is not cheap enough to make trade lively. Extracted brings 7@10c. on arrival; comb honey, 14@20c.

BEESWAX—Is scarce and brings 20@27c. on arrival. CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—January month, and still there is a large surplus of comb honey on the market. Prices are weak owing to large offerings, and anxiety on the part of shippers and holders here to realize on the product. Extracted honey is steady, but the demand is light.

We quote: white comb honey, in 1@2 lb. sections, 17@18c. Dark comb honey, hardly any demand. It is held at 12½@15c. Extracted—White brings from 9@10c.; dark, 8@9c.; kegs, half-barrels and casks bring about same price.

BEESWAX—Yellow, 30@32c.; dark, 27@28c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—Business in this line has been extremely dull the past week. Quotations are little more than nominal.

White comb, 17@20c; dark to good, 11@13½c; extracted, choice to extra white, 8½@9½c.; dark and candied, 7@8c.

BEESWAX—We quote 25@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Dull. Comb, at 16c. for large or hard to 19@20c. for choice bright in small packages; extracted at 8@9c.; strained, 6½@7c.; choice, in smaller quantities, brings more.

BEESWAX—Prime bright steady at 27@28c.

W. T. ANDERSON & CO., 117 N. Main Street.

CLEVELAND.

HONEY—Has changed in price a very little, we find it necessary to sell all grades about 1 cent per ℔. less. Best white, in 1 ℔ sections, 20@21c. per per pound; in 2 lb. sections, 18@20c. Extracted is very dull indeed, hardly any sale.

BEESWAX—Scarce, 28@30c.

A. C. KENDEL, 115 Ontario Street.

NEW YORK.

HONEY—There is only a moderate supply of choice to fancy white clover honey, and prices are still held firmly, though the demand is not large. Buckwheat and extracted honey continue slow.

We quote: White clover, first quality, 1 ℔ boxes, 25c; 2 lb. boxes, 23@25c.; buckwheat, 1 ℔ boxes, 20c.; 2 lb. boxes, 16c. Extracted, white, 11@12c.; dark, 8@9c.

BEESWAX—The supply has been light and prime lots held a shade higher.

Western pure, 30@31c; southern, pure, 31@32c.

D. W. QUINBY, 105 Park Place.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—30c.

CROCKER & BLAKE, 57 Chatham Street.

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

☞ Do not let your numbers of the BEE JOURNAL for 1882 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

☞ Attention is called to a few changes in our clubbing list for 1883, as given on this page. Those interested will please take notice.

Advertisements.

THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

SWEET CLOVER SEED.—New and clean, 25 cts. per lb. BEN CLENDENON, Grinnell, Ioa
56w13

DUNHAM COMB FOUNDATION—40c. per pound; extra thin and bright, 10 sq. ft. to the lb. 48c. Send for samples. Wax worked 10c. per lb. F. W. HOLMES, Coopersville, Mich. 13w1y

Bees for Sale.

50 Colonies of Bees, in Gallup frames, cheap.

200 Colonies of Bees, in Langstroth frames in prime condition.

J. H. ROBERTSON,
36wtf Pewamo, Ionia Co., Mich.

STUDENTS
IN BEE-CULTURE.

Having had such good success for two years past in teaching the theory and practice of honey-producing, I have now made arrangements to accommodate a large class during the coming season. I shall aim to give a five months' instruction, at the end of which time I hope and expect to turn out bee-keepers competent to profitably engage in the pursuit, or such as will be sought for as assistants, at wages above common laborers. All interested, **write for terms.**

BEE-KEEPERS' SUPPLIES

on hand, as usual. Beeswax wanted.

JAMES HEDDON.
Dowagiac, Mich. 1*tf

LIVE BEE-KEEPERS WANTED,

to introduce the new lime cushion, the only protection yet discovered that will carry the bees safely through winter and spring without fail. Send $50, for right to retail this cushion in your county, or send $5 for one apiary right to patentee. Remit by registered letter or P. O. order.

F. DELLA TORRE.
74 Charles-st. Avenue, Baltimore, Md.
Patented April 25, 1882. No. 254,932. 45w13t

THE CONQUEROR.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent postpaid for $2. Address,

BINGHAM & HETHERINGTON,
Abronia, Mich.

A NEW IMPORTATION OF
CHOICE
BOKHARA Clover SEED
has arrived and is for sale cheap.

Apply to CHARLES F. MUTH,
49sm4t CINCINNATI, O.

BE SURE

To send a postal card for our Illustrated Catalogue of Apiarian Supplies before purchasing elsewhere. It contains Illustrations and descriptions of everything new and valuable needed in an apiary, at the lowest prices. Italian Queens and Bees. Parties intending to purchase bees in lots of 10 colonies or more are invited to correspond.

J. C. SAYLES,
51sm15t Hartford, Wis.

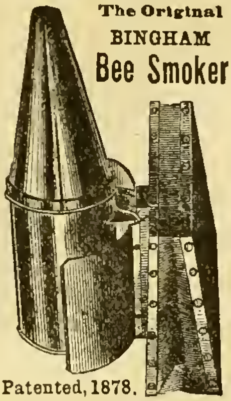
"RED TAPE!"

Who will be the first to copy?

The Original BINGHAM Bee Smoker

25,000 IN USE.

If you buy the Original Patent Bingham Bee Smoker, you will aid the inventor of improved bee smokers—get the best, that never go out—always please—never is complained of—the standard of excellence the world over—better and handsomer this season than ever before. Price per mail, postpaid, from 65 cts. to $2. Our patents cover all the smokers that will burn sound stove-wood, or do not go out. If you buy our smokers and honey knives first, you will have to buy no others.



Patented, 1878.

PRICES:

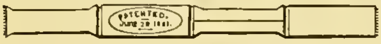
	Handed to Customer.	By Mail, Postpaid.
Wide shield Conqueror, 3 inch	$1 75	$2 00
Large Bingham Smoker (wide shield), 2½ inch	1 50	1 75
Extra Bingham Smoker (wide shield), 2 inch......................	1 25	1 50
Plain Bingham Smoker, 2 inch....	1 00	1 25
Little Wonder Bingham Smoker, 1¾ inch	50	65
Bingham & Hetherington Honey Knife, 2 inch........................	1 00	1 15

To sell again, apply for dozen or half-dozen rates.

Send for free description and testimonials, to

BINGHAM & HETHERINGTON,
17wtf **Abronia, Mich.**

HIVES
—AND—
SECTIONS.


PATENTED, June 28 1881.

We have just put in several new machines and also a larger engine in our factory, consequently we are in better shape to fill orders than ever for Bee Hives, Sections, Shipping Crates, etc. We make a specialty of our

"BOSS" ONE-PIECE SECTIONS,

Patented June 28th, 1881.

We can make the "Boss" One-Piece Sections any size or width desired. Send for Price List.

We make the Half-Pound Section any size desired.

JAS. FORNCROOK & CO.
Watertown, Jeff. Co., Wis., Sept. 1, 1882.

Cheap! Cheaper!! Cheapest!!!

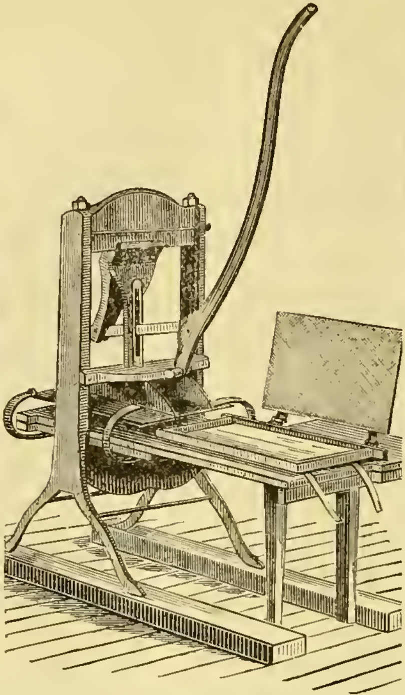
300 COLONIES OF BEES

for sale, in movable frame hives. Also, Queens, Nuclei, Bees by the pound, Hives, Sections, Smokers, Seeds for Honey Plants, and everything a live bee-keeper needs. Send for circular and price list to **FLANAGAN & ILLINSKI,**
Box 819, Belleville, St. Clair co., Ill.
(Proprietors of Rose Hill, Cahokia, Falling Springs and Lake Apiaries. 1wm1y

50 CENTS
FOR THREE MONTHS.

The new volume (nineteen) of DEMOREST'S ILLUSTRATED MONTHLY MAGAZINE for 1883 is the best and the cheapest Family Magazine published, printed on the finest tinted paper, size 8¼ x 11½ inches. The three numbers now ready of volume 19 weigh 1½ pounds and contain 210 pages of large, clear print. New Novelettes, Stories, Biographies, Poetry, Travels, and valuable information of the day and for the household. In demand by every family. 144 Illustrations, 6 Photo Plates and 4 Oil Pictures. W. JENNINGS DEMOREST, Publisher, 17 East 14th Street, New York. Single copies, Twenty Cents; yearly subscription, Two Dollars. 1¶2tp

Given's Foundation Press.



PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

D. S. GIVEN & CO.,
1*¶tf HOOPESTON, ILL.

PLYMOUTH ROCKS

Iroquois Strain. Four Yards.

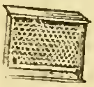
Correspondece cheerfully answered Prices reasonabl
W. H. BUSSEY, 131 Lake Street, Chicago.

IMPORTANT TO BEE-KEEPERS.

Send your address for our Circular and Prospectus of our NEW BOOK on QUEEN REARING.

HENRY ALLEY,
1*¶tf WENHAM, MASS.

FLAT - BOTTOM
COMB FOUNDATION,



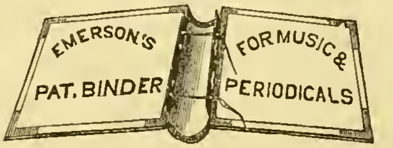
high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

BIND YOUR JOURNALS

AND KEEP THEM

NEAT AND CLEAN.



The Emerson Binder

IS THE NEATEST AND CHEAPEST.

Any one can use them. Directions in each Binder.

For Monthly Bee Journal.............. **50c.**
For Weekly Bee Journal............... **75c.**

Address, **THOMAS G. NEWMAN,**
925 West Madison Street, **Chicago, Ill.**

The Bee-Keeper's Guide;
OR,
MANUAL OF THE APIARY,
By A. J. COOK,
Of Lansing, Professor of Entomology in the
State Agricultural College of Michigan.

—:o:—

320 Pages; 133 Fine Illustrations.

—:o:—

This is a new edition of Prof. Cook's Manual of the Apiary, enlarged and elegantly illustrated. The first edition of 3,000 copies was exhausted in about 18 months—a sale unprecedented in the annals of bee-culture. This new work has been produced with great care, patient study and persistent research. It comprises a full delineation of the anatomy and physiology of the honey bee, illustrated with many costly wood engravings—the products of the Honey Bee; the races of bees; full desccriptions of honey-producing plants, trees, shrubs, etc., splendidly illustrated—and last, though not least, detailed instructions for the various manipulations necessary in the apiary.

This work is a masterly production, and one that no bee-keeper, however limited his means, can afford to do without. It is fully "up with the times" on every conceivable subject that can interest the apiarist. It is not only instructive, but intensely interesting and thoroughly practical.

—:o:—

Read the following opinions of the Book;

All agree that it is the work of a master and of real value.—*L'Apiculture*, Paris.

I think Cook's Manual is the best of our American works.—LEWIS T. COLBY.

It appears to have cut the ground from under future book-makers.—*British Bee Journal.*

Prof. Cook's valuable Manual has been my constant guide in my operations and successful management of the apiary.—J. P. WEST.

I have derived more practical knowledge from Prof. Cook's New Manual of the Apiary than from any other book.—E. H. WYNKOOP.

This book is just what everyone interested in bees ought to have, and which, no one who obtains it, will ever regret having purchased.—*Mich. Far.*

To all who wish to engage in bee-culture, a manual is a necessity. Prof. Cook's Manual is an exhaustive work.—*Herald*, Monticello, Ill.

With Cook's Manual I am more than pleased. It is fully up with the times in every particular. The richest reward awaits its author.—A. E. WENZEL.

My success has been so great as to almost astonish myself, and much of it is due to the clear, disinterested information contained in Cook's Manual.—WM. VAN ANTWERP, M. D

It is the latest book on the bee, and treats of both the bee and hives, with their implements. It is of value to all bee-raisers.—*Ky. Live Stock Record.*

It is a credit to the author as well the publisher. I have never yet met with a work, either French or foreign, which I like so much.—L'ABBE DU BOIS, editor of the *Buletin D' Apiculteur*, France.

It not only gives the natural history of these industrious insects, but also a thorough, practical, and clearly expressed series of directions for their management; also a botanical description of honey producing plants, and an extended account of the enemies of bees.—*Democrat*, Pulaski, N. Y.

We have perused with great pleasure this *vade mecum* of the bee-keeper. It is replete with the best information on everything belonging to apiculture. To all taking an interest in this subject, we say, obtain this valuable work, read it carefully and practice as advised.—*Agriculturist*, Quebec.

This book is pronounced by the press and leading bee-men to be the most complete and practical treatise on bee-culture in Europe or America; a scientific work on modern bee management that every experienced bee-man will welcome, and it is essential to every amateur in bee-culture. It is handsomely printed, neatly bound, and is a credit to the West.—*Western Agriculturist.*

This work is undoubtedly the most complete manual for the instruction of bee-keepers which has ever been published. It gives a full explanation regarding the care and management of the apiary. There is no subject relating to the culture of bees left untouched, and in the compilation of the work Prof. Cook has had the advantage of all the previous knowlede of apiarists, which he uses admirably to promote and make popular this most interesting of all occupations.—*American Inventor.*

—:o:—

PRICE—Bound in cloth, **$1.25**; in paper cover, **$1.00** by mail prepaid. Published by

THOMAS G. NEWMAN,
West Madison Street, CHICAGO, ILL.

Send to I. R. GOOD

For Price List, for 1883, of

HOLY-LAND AND ITALIAN BEES

AND QUEENS,

And "Given" Comb Foundation.

He will give satisfaction or refund the money.

1*5t Nappanee, Elkhart Co., Ind.

PRIZE QUEENS.

Tested Prize Queen, in a 2-frame nucleus, 9x17, each,	$4 00
Same in nucleus, 4 fra., 8x8,	4 00
Tested Prize Queen, by mail,	3 00
Prize Queen, warranted purely fertilized	2 00
Queen, not standard size	1 00
Full Colony, 8 frames, Prize Queen	9 00

Before July 1, add $1 each.
Cash Orders filled in rotation.
Address **E. L. BRIGGS,**
1*1y Wilton Junction, Iowa.

AGENTS WANTED FOR THE LIVES OF THE MARTYR PRESIDENTS.

Abraham Lincoln, "From Pioneer Home to White House," and **James Abram Garfield**, "From Log Cabin to White House." In English and German. Illustrated with fine steel engravings. By an eminent author. Also, for the **ONLY large steel portrait of Garfield**. Send for **extra terms**.

THE HENRY BILL PUBLISHING CO.,
50w8t NORWICH, CONN.

THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

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Describes all the newest discoveries in the art, by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive shape.—Signal, Napoleon, O.

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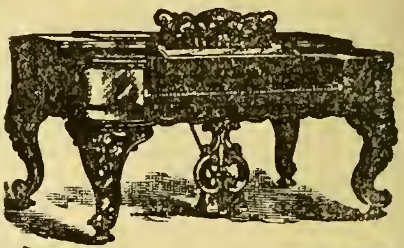

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THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED EXCLUSIVELY TO PROGRESSIVE BEE CULTURE.

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THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

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Bee and Honey Show in Michigan.

Nothing will give more prominence to honey, and aid in its popular consumption than large and attractive exhibitions of it at fairs, and we are glad to know that Michigan is taking the lead in this matter. It is a pattern well worth the copying, and the result will, no doubt, surprise even its most active workers. We have received the following letter from Prof. Cook, with the list of premiums to be awarded at the next Michigan State Fair:

DEAR MR. NEWMAN:—I send the following, as I know that you and others will not only be interested but rejoice in our success. We owe our secretary, H. D. Cutting, as also the Agricultural Committee, a hearty vote of thanks. You see we increase $64.50 on last year's premiums.

There is a bright outlook in this direction. Improved bees, better pasturage, and grand exhibitions at fairs, promise much for apiculture. We are to have a nice building and the right to make sales.

If Michigan does not have a grand exhibition next fall, then I misjudge her apiarists. A. J. COOK.
Lansing, Mich., Jan. 16, 1882.

The full list of premiums, both of last year and this, are given below, so that all may see what has been accomplished by Mr. Cutting and Prof. Cook, in their labors with the Board of the Michigan State Agricultural Society.

DIVISION II—BEES, HONEY, ETC.

Superintendent—W. J. BAXTER, Jonesville.

COMPETITION OPEN TO THE WORLD.

All entries in this division must be made on or before Tuesday, the second day of the Fair, at 2 o'clock, p. m.

II—CLASS 38.—BEES, HONEY AND APIARIAN IMPLEMENTS.

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	1st Pr.	2d Pr.	1st Pr.	2d Pr.
Colony of Bees of any kind, in movable comb hive	$5 00	$3 00	$8 00	$4 00
Colony of Italian Bees, in movable comb hive	5 00	3 00	8 00	4 00
Colony of Syrian Bees, in movable comb hive.	5 00	3 00	8 00	4 00

NOTE.—Numerical strength, purity of race and docility of disposition, shall constitute the competing points in judging the above.

	1882.		1883.	
	1st Pr.	2d Pr.	1st Pr.	2d Pr.
Collection of queenbees, alive	3 00	.....	5 00	3 00
Largest and best display of comb honey	10 00	5 00	15 00	10 00
Largest and best display of extracted honey	10 00	5 00	10 00	5 00
Specimen of comb honey, not less than ten pounds, and the manner of putting up to be considered	5 00	3 00	8 00	4 00
Specimen of extracted honey, not less than ten pounds, and the manner of putting up to be taken into consideration	5 00	3 00	5 00	3 00
Ten pounds of beeswax	2 00	1 00	4 00	2 00
Specimen of comb foundation	3 00	1 00	3 00	1 00
Largest and best collection of apiarian implements, to include hives honey extractors, wax extractors, comb foundation machines, honey knives, shipping cages, etc	10 00	.....	10 00	.....
Honey extractor	3 00	2 00	5 00	3 00
Bee smoker	2 00	1 00	3 00	2 00
Honey knife for uncapping	1 00	.....	1 00	.....
Comb foundation machine	5 00	3 00	5 00	3 00
Wax extractor	2 00	.....	3 00	2 00
Section for comb honey	1 00	.....	1 00	.....
Largest and best collection of bee literature.	5 00	.....	8 00	.....
Best movable frame bee-hive for all purposes			8 00	5 00
Best queen cage for shipping and introducing queens			2 00	.....
Best collection of honey-bearing plants, pressed and mounted, or in bloom.			5 00	.....
Best display of queens and bees under glass, in such shape as to be handled by visitors			5 00	.....

For 1883.......... $179 50
For 1882.......... 115 00

Increase for 1883.......... $64 50

◆

☞ The Hon. Louis Wallbridge, one of the principal apiarists of Canada, has been appointed Chief Justice of Manitoba, and has gone there to enter upon his duties. The Judge is a thoroughly practical and progressive apiarist.

Origin of Noise in Swarming-time.

Much has been said and written about the object of making a great noise, by the ringing of bells, beating of tin pans, etc., when a swarm issues from the hive, and is in the air. In the Bee Journal for January 3, Mr. Arthur Todd, of Philadelphia, Pa., (formerly of Algeria, Africa,) referred to the matter, as being no proof that bees could hear, and that it had no influence on the bees to make them settle. His letter was as follows:

> On page 803, of the Bee Journal for Dec., 1882, reference is made to certain remarks of Sir John Lubbock, and the influencing of bees, when swarming, to settle by making loud noises, etc., etc. I am decidedly of the opinion that it is not to the sense of hearing on the part of the bees, that the custom of beating tin cans, etc., took its rise, but to the sense of hearing in the human family, and why? For the simple reason that the ancient laws relating to bees, vested the ownership in a swarm only to him from whose grounds they departed, provided he followed them, and kept them in sight until they alighted. Now, what more natural than to "kick up a row" for the sole purpose of letting others know that the bees seen in flight were being followed. I regret that I cannot at present consult my library of bee books and give the words of the ancient laws. I think the wording would go far to prove my hypothesis correct. Arthur Todd.
>
> Philadelphia, Pa., Dec. 25, 1882.

Mr. Todd is evidently correct, and is corroborated by a correspondent in the London *Journal of Horticulture*, who says that "the custom of ringing bells, beating pots or kettles, and otherwise making as much noise and hubbub as possible when a swarm issues, was in vogue in very early ages. Since we do not believe that the noise has any effect whatever in causing the swarm to settle, we can only suppose that the institution of the custom was for the purpose of giving notice to the neighboring bee-keepers that the operator on the bell, drum, or kettle claimed the rising swarm and identified it as his own.

"Habit is second nature," says the proverb, and the habit in question holds sway over the rural bee-keeping world, for long centuries after the cause for and establishment of that habit has been forgotten. By an old law, of the time of Alfred the Great, a bee-keeper is permitted to follow and to secure his swarm if on another's property; but he must keep the swarm in sight, and that his neighbors may know he is following it he must ring a bell as he pursues it.

The bell-ringing is now oftener replaced by yelling and the beating of a kettle or rattling of fire-irons, and the bee-keeper is not so much intent on calling his neighbors' attention to the fact that he is following his bees, as on charming the swarm and causing it to alight, seduced or terror-stricken by his rough music.

The law of Alfred evidently explains the origin of the custom, although, as we said above, the habit prevailed centuries before that law was made. Virgil refers to the tin-can music in his fourth Georgic. Plato, Pliny, Varro, and Columella all speak of it, and attribute the settling of the bees either to fear or joy; while Aristotle is not certain what the effect is which the beating of brazen vessels has on the bees.

A violent concussion of the air often affects a swarm; hence some fire a gun near the hovering swarm to cause it to settle; others throw gravel or dirt among them. Many bee-keepers use a Whitman's Fountain Pump to bring the bees down; this disorganizes them, causes general confusion, and they usually settle at once. The wetting of their wings also makes them in a hurry to obtain shelter, the same as they would in a shower of rain.

These are modern practical ways of doing what has been, by the superstitious in ages past, sought to be accomplished by charms, such as bell-ringing, pan-beating, and such like noisy demonstrations.

☞ The *Indiana Farmer* says that "the two most important questions to the bee-keeping interest of the country are providing pasturage for the bees, and as to the size of the packages for surplus honey." These questions are now being discussed in the Bee Journal, and while it is the duty of every bee-keeper to find "pasturage for the bees," just as much as for other stock, no progressive apiarist will fail to give the "best package for surplus honey" the due amount of thought, and by many experiments and repeated trials, the right size and shape will be developed in due time.

Special Notice.—We will, hereafter, supply the Weekly Bee Journal for 1883 and Cook's Manual in cloth for $2.75, or the Monthly and Manual in cloth for $1.75.

☞ Attention is called to our *new* and liberal advertising rates for 1883.

A Sweet Endowment.—The following item is from a local paper sent us by Mr. E. Pickup, of Limerick, Ill.:

> Last spring was very poor for bees; so Edmund Pickup fed about 50c. worth, per hive, in bee candy, sugar and honey. In the fall he got a little over 4,000 lbs. of comb honey; an average of 138 lbs., spring count, and increased from 29 colonies to 90, besides 6 "swarms" otherwise used, and 8 got away. More than one-half were black bees. The best colony in spring produced 236¾ lbs., and 3 swarms; the best old colony 99¼ lbs., beside one swarm. From the best colony 122¾ lbs.; from the 2nd best, 68 lbs.; from the 3d best, 27 lbs.; the 4th best, 29½ lbs. Honey at 15 cts. per lb., and new colonies at $5 each, gave a net compensation of $30.50 per hive in spring. John, brother of Edmund, has an interest in the bees; so the Pickup brothers show great skill and industry in bee-keeping. Yesterday Mr. Edmond Pickup gave to the Limerick church 666⅔ lbs. of honey—$100 worth—for an endowment fund. This is a praiseworthy act of Mr. Pickup, and will live after him.

☞ By a copy of the Savannah, Ga., *Abend Zeitung*, we notice that Prof. Reclam gave a lecture on "Honey as Food and Medicine," in that city lately, in which he drew largely upon our pamphlet on that subject, strongly endorsing it and advising a more generous use of honey in families for food, and highly recommending it for its medicinal qualities; and for healing wounds he says its value cannot be over-estimated.

☞ The next meeting of the Maine Bee-Keepers' Association will be held at Dexter, February 8th and 9th, 1883. A large attendance of bee-keepers from different parts of the State is expected, and it is hoped that it may be one of the most interesting meetings ever held by the Association. A large exhibit of hives and implements, used in the apiary, is expected; and all attending the meeting are earnestly requested to bring something to help make a good display. Any article sent to the Secretary will be placed on exhibition, and cared for, free of charge. The following is an imperfect outline of the programme for the two days: First day:—Secretary's report; Treasurer's report; reports of Vice Presidents of the different counties represented; President's address; choosing committee to award preferences on articles exhibited; reading of essays and discussions. Second day:—Election of officers; report of committee on articles exhibited; reading of essays and discussions. Essays are expected on the following subjects—Feeding Bees; How to make Bee-keeping Profitable; Artificial Pasturage; The Coming Bee, etc., etc.

Ripley, Me. Wm. Hoyt, *Sec.*

Bee and Honey Statistics in Illinois.

In accordance with the "hint" given by Mr. S. B. Atwater, on page 57 of this issue of the BEE JOURNAL, we sent a letter to C. W. Fisher, Esq., Secretary of the State Board of Agriculture, asking for any statistical information in his office on bees and honey in Illinois during the past year. In reply we received a very gentlemanly letter, and the following table, which will be found very interesting to our readers:

COUNTIES.	Colonies, 1882.	Pounds Honey, 1881.
Adams	640	2,235
Alexander	460	9,528
Bond	......	......
Boone	178	3,111
Brown	395	4,125
Bureau	1,209	9,957
Calhoun	435	2,210
Carroll	298	2,034
Cass	1,159	6,317
Champaign	2,436	15,045
Christian	1,625	8,982
Clark	1,102	7,257
Clay	1,370	6,588
Clinton	829	3,584
Coles	1,139	9,287
Cook	231	2,925
Crawford	883	3,614
Cumberland	915	9,468
DeKalb	360	10,049
DeWitt	1,053	8,253
Douglas	781	9,250
DuPage	19	112
Edgar	1,052	5,617
Edwards	400	1,796
Effingham	1,736	1,415
Fayette	1,568	4,601
Ford	369	1,784
Franklin	......	......
Fulton	1,799	9,038
Gallatin	412	2,517
Greene	565	3,643
Grundy	650	6,303
Hamilton	859	8,537
Hancock	1,351	11,980
Hardin	303	1,555
Henderson	187	1,696
Henry	1,317	9,638
Iroquois	1,650	12,159
Jackson	738	4,763
Jasper	1,563	9,631
Jefferson	633	4,969
Jersey	264	450
JoDaviess	78	455
Johnson	567	2,237
Kane	574	3,843
Kankakee	1,032	7,062
Kendall	351	4,264
Knox	1,073	7,661
Lake	......	......
LaSalle	1,517	17,942
Lawrence	797	6,236
Le	......	......
Livingston	1,487	5,350
Logan	2,566	13,898
Macon	1,523	7,842
Macoupin	814	3,868
Madison	......	......
Marion	1,965	11,824
Marshall	431	3,684
Mason	......	......
Massac	250	1,751
McDonough	659	2,316
McHenry	675	14,298
McLean	3,017	30,108
Menard	978	18,722
Mercer	793	7,088
Monroe	252	722
Montgomery	1,430	7,029
Morgan	614	7,327
Moultrie	441	1,032
Ogle	366	7,592
Peoria	845	7,193
Perry	89	1,175
Piatt	1,038	4,819
Pike	784	2,695
Pope	324	1,951
Pulaski	......	......
Putnam	488	7,337
Randolph	547	1,506
Richland	562	2,850
Rock Island	363	2,865
Saline	754	4,135
Sangamon	2,041	8,372
Schuyler	789	2,331
Scott	123	452
Shelby	2,314	14,720
Stark	442	3,325
St. Clair	1,241	4,679
Stephenson	952	14,904
Tazewell	985	5,482
Union	1,662	9,258
Vermillion	1,975	8,599
Wabash	611	4,985
Warren	977	12,496
Washington	896	6,667
Wayne	1,829	11,024
White	1,222	4,393
Whiteside	1,146	16,056
Will	415	4,640
Williamson	806	4,547
Winnebago	447	12,220
Woodford	693	3,065
Total	86,633	618,947

We are sorry the table is not quite complete, and would suggest to the Board of Agriculture that they add two more columns for the coming season—one for "increase" of colonies, and a division of the honey column, giving the number of pounds each of "extracted" and "comb" honey produced. Then it will be much more valuable.

Only a Crape on The Door.—We have just received a copy of a new motto song and chorus, called "Only a Crape on the Door," composed by Edward J. Abraham, a most touching and affective song. It is very easy, and can be played on piano or organ.

Of the many sad scenes in the city, you see,
Of the poor who are wanting for bread;
Of the homeless who wander so sadly about,
Of the mourners who watch o'er their dead.
Of all these sad scenes, the saddest of all,
Should you travel this wide world all o'er;
Just pause in your journey should you chance to see,
Only a Crape on the Door.

CHORUS.—Only a Crape on the Door—
A friend or a loved one no more:
Just pause for awhile should you happen to see
Only a Crape on the Door.

Price, 40 cents per copy, or three copies for $1.00. Published by F. W. HELMICK, Music Publisher, 180 Elm St., Cincinnati, Ohio.

☞ We have a few copies of our pamphlet entitled "*Bee Culture*" left, and have reduced the price from 40 to 25 cents each, or $2 per dozen.

Feeding Bees in Winter.—A correspondent in the Germantown *Telegraph* thus describes his method of feeding bees in winter:

In the first place let me say that I would prepare the feed in the shape of a syrup, thus:—Take of pure clean water two pounds to four pounds of sugar; A coffee or extra C is best. Bring the water to a boiling heat and then add the sugar; stir well until it again boils, and skim off all impurities; then let it cool and fill up glass tumblers and tie cotton cloth over each, and turn them upside down over holes in the top of the hives, if of the old-fashioned box or gum log, and you will have the satisfaction of seeing the tumblers soon emptied and stored in the brood combs. If you are using a good movable frame hive you can feed your syrup in the top of it in the following way: Take some old bits of combs and lay in the surplus chambers, and pour the syrup over them, and the bees will take it all down. Feed as fast as they empty the glasses or combs referred to. We should feed all weak colonies late in an evening, which will prevent robbing in a great degree. If you use the glass tumblers to feed from, I would recommend boxes to be turned over them so as to keep robber bees out.

☞ Referring to the lecture by the Rev. O. Clute, of Iowa City, Iowa, on "Bee-Keeping by Modern Methods," delivered before the "Iowa State Agricultural Society," at Des Moines, last week, the Iowa *State Register* remarks as follows: "He gave an address of considerable length, going extensively into the minutæ of the fascinating subject, and having a bee-hive at his side to help elucidate his idea. When he had concluded, he was subjected to a long fusilade of questions from his interested hearers, and his ready answers proved even more instructive than his address proper. The address and subsequent discussion will be printed in the forthcoming report of the Society."

☞ The Springfield, Mass., Weekly *Republican* gives the following notice of the BEE JOURNAL:

If there are bee-keepers in the *Republican's* constituency or those who would like intelligently to make a venture in apiculture, no more valuable source of instruction can be recommended to them than the AMERICAN BEE JOURNAL, published both weekly and monthly at Chicago by Thomas G. Newman. Mr. Newman is an enthusiast in bee-culture, and has a happy knack of drawing out all the other bee-keeping enthusiasts of the country, who contribute to his journal the fruits of their observation and experience.

CORRESPONDENCE

For the American Bee Journal.

How to Ventilate Chaff Hives.

G. M. DOOLITTLE.

The principal method of ventilating our hives, for the past 10 or 15 years, has been by what is known as "upward ventilation." The means generally employed has been a quilt or porous cloth placed over the frames, on the top of which was placed chaff of various kinds, cut straw and sawdust, which were to absorb the moisture from the bees, or let it pass off, and at the same time keep the bees dry and warm.

As the entrance was to be left open, to some extent, this plan gave a slow draft of air through the hive, thus keeping the air pure, and carrying off the moisture thrown off by the bees. This draft must be in proportion to the size of the colony, else the bees might be kept too cold, as too great a draft would carry away the heat generated by the cluster, so that they could not keep up the desired temperature, without consuming more honey than was best for their existence, in order to maintain the proper temperature; or, if too little, the moisture would not be carried off.

To get this draft just right, appears to be a very nice point, if we can judge from the many losses in the past. My bees have been prepared as above described, for the past 8 years, and my losses have been large in severe winters, while in mild ones but little difficulty has been experienced. To try and arrive at the proper amount of air which should pass through a hive, I have experimented largely, and believe that I have erred in allowing too great a draft through the hive.

As all our material used is so porous, a very small entrance allows the warm air generated by the bees to pass off very rapidly, and more especially so, when the cluster does not come in contact with any of the surrounding material, only at perhaps two or three places. Thus the heat passes into empty space, and is carried through the porous material much too fast.

From past experience, I believe, if we shut our hives as tightly at the bottom as we conveniently can, that enough air will get in through the cracks to furnish all that is needed for safe wintering.

I am trying, the present season, another plan of ventilating, which, so far, bids fair to excel our old plan of "upward ventilation." It will be remembered that Mr. A. G. Hill, editor of the *Bee-Keepers' Guide*, has always favored chaff packing, but has opposed upward ventilation. He simply places sawdust around the outside of his hives, and lets in all the ventilation the bees get, at the entrance.

After studying upon the matter for a while, I concluded to try a few of my colonies on a plan similar to Mr. Hill's, and pack the majority as I had formerly done.

In accordance with this determination, I prepared a few colonies thus: I took the enameled cloth and cut it large enough, so that it would completely cover the tops of the hives and tuck down over the sides and also where the side boxes were, placing the enameled side next to the bees. I then put in the packing, filling the sides as full as possible, and also the cap or chamber to the hive, making it so full that I was obliged to place hooks on the same, and hook it down to the body of the hive, in order to keep it in place.

After thus preparing them, I opened the entrance the full size, in all the hives, which is ⅜ inches high by 14 inches in length. As an experiment, I raised four from the bottom board, placing an inch block in the entrance, which gives them air from the whole width of the front of the hive, an inch in depth. Although this last allows the snow to blow in, to some extent, the bees seem to be in splendid condition.

We have just had some very cold weather, the mercury going as low as 15° below zero, yet, upon examination, I find but little frost in the hives, and that in the extreme outside corners, the farthest away from the bees. In one or two I found ice formed in drops, as large as the end of my finger, upon the enameled cloth at the edges of the hive, but the bees invariably look small, bright and healthy; while some of them with upward ventilation show distended abdomens, with here and there a spot of excrement on the combs.

So far, our winter has been a steady cold one, and if it does not warm up enough so that bees which are on their summer stands can have a flight before the 1st of March, I fear we shall hear of mortality amongst our pets again.

Under the most favorable conditions bees can stand from 4 to 6 months of confinement, without harm, but where we are lacking, seems to be in not knowing just what these "most favorable" conditions are. If from long confinement and the large consumption of honey necessary to keep up the desired temperature, the bees find their vitality giving out, instinct seems to teach them to go to rearing brood, to supply the place of those about to die. As the young bees from this brood are not capable of standing the cold, to that extent which the old bees have been capable of, when the majority of the old bees perish, the colony soon dwindles away.

That the consumption of pollen has anything to do with this state of affairs, is not sufficiently proved to warrant us in excluding it from the hives. The point I am desirous of arriving at is, how can we best secure a condition in which to place our bees, so that an undue consumption of honey can be avoided during a long confinement. I think chaff packing, together with lower ventilation, may give us some light on the subject.

Borodino, N. Y., Jan. 15, 1883.

For the American Bee Journal.

The Half-Pound Honey Section.

DR. G. L. TINKER.

DEAR EDITOR:—A sample dovetailed half-pound section, 4¼x4¼x1⅛, as suggested by Mr. Bingham in a recent issue of the BEE JOURNAL, is at hand from Mr. A. E. Manum. It is too thin to look well, and, even if there should be no trouble to get the bees to build straight combs in it without separators, it would not have the advantages of some other form.

A half-pound section may be made to put immediately upon the brood frames, if it be of a thickness equal to the distance from centre to centre of the frames. Or a rack of sections, of the right thickness, could be put upon the frames, so that the passage ways between them and the sections would be continuous. This would be of great advantage in many respects, and might fully compensate the extra cost of so many small sections.

For several years I have sought some plan to put a case or rack of sections down at once on the brood frames, so that the passage ways would be continuous, and found it could not be done with a two-inch section; but the half-pound section can be made just the thing for this purpose, and since some change in the surplus arrangement of most bee-keepers will be necessary to accommodate a half-pound section, less than 2 inches in thickness, it would be far better to adopt the most advantageous size and form of section at once, and then make the surplus arrangement to fit, than to undertake to make the half-pound section to fit a surplus arrangement made expressly for sections of other sizes.

First, then, the sides of the half-pound section should be 1⅜ inches wide; the top and bottom pieces 1⅛; and it should be used without separators, to make it pay. The thickness being given, the proper dimensions would be 3¾x3¾x1⅜.

This size would be a little gem indeed, and, beyond question, could be used without separators, if any sized section could be; 36 of them could be put upon one rack (9 rows and 4 in a row), which could be tiered up 4 sections high to advantage, and thus give room for 72 lbs. of honey. In arranging a lot of small sections upon a rack, it will be seen at once that the square form can be worked to the best advantage.

The rack may be made of slats ⅛x1⅛x17 inches long, nailed at the ends to inch pieces. The brood frames would need to be on a level with the top of the body of the hive, which should be flat and have a removable case and cover. The hive, being flat on the top, will permit the sliding of the rack endwise over the frames, so that no bees will be killed. I have tried a similar plan to this with entire success. If the rack is accurately made, the tiering up can be very expeditiously done by sliding one rack of sections over the other, endwise.

If it should be found impracticable to use any size of section without separators, then the proper dimensions for a half-pound section, according to my ideas, would be 4¼x4¼x1⅜.

New Philadelphia, O., Jan. 1, 1883.

For the American Bee Journal.

The Coming Bee—Enough.

JAMES HEDDON.

I will here try to make my position upon this subject so clear that this tedious controversy may waste no more time or paper, and Messrs. Demaree and Shuck may turn their time to writing upon other subjects. I here publicly invite Mr. Demaree to give us a ringing article on "How Best to Market a Large Crop of Honey."

First, I believe that we have two well-known races of honey bees in this country—Germans and Italians? Am I correct?

Second, That we have at least two distinct strains of each of these well-known races, viz., among the Germans a smaller black and larger brown bee, and, among the Italians, a shorter-bodied, bright golden-colored, and longer-bodied, darker, leather-colored bee. Am I right?

Third, That, of the German strains, the larger brown bee is vastly the superior one. Of the Italian, the long, darker bee is the best. Am I right?

Fourth, That each one of these races possess traits much superior to the other, traits much desired by the more extensive producers. Is this an error?

Fifth, That when all the characteristics of both races are considered carefully, the Italian aggregates the most, and is, all points considered, the best bee extant; this is admitted by the majority. Anything wrong about this?

Sixth, That any, and all of these points of excellence are hereditary. Are they not?

Now, as it is a fact, to say the most, the Germans are only *slightly* inferior to the Italians in the *aggregate*, and that in the vital points of rapid, white and straight comb building, non-swarming and quick and white finishing of sections of comb honey, they are their *superiors*. I, 5 years ago, decided to breed from all of the good and bad qualities of both races, rather than both good and bad of either one alone, all the time discouraging the bad, and encouraging the good, by all the processes known to breeders, the same as any wise breeder would do with either race in its purity. Have Messrs. Shuck or Demaree shown us why I could have developed more good qualities (such as white, straight and rapid comb building) by breeding alone from a race that did not possess it? But we do not see through the same glasses.

I am looking forward to the near day when I shall have from $5,000 to $10,000 worth of bright comb honey in nice white little sections to sell—all the product of one season.

Do you know that, do what I might with these bright golden Italians, I could never accomplish it, unless with double the number of colonies that I expect to use?

Mr. Demaree always talks to us about "thorough-bred stock." His mind always runs horse and cornward before he has properly canvassed the subject of breeding the best qualities in bees.

> "Oh! Mr. Demaree, come back,
> From your blue-grass, corn pasture,
> And look at this theme
> As should a bee master."—*C. J. R.*

Why tell me, over and over, that I "can never establish a fixed race with only two pure races?" Who said I could? I never knew whether I could or not; I only knew that I could get more surplus honey with less friction and stings, with these crosses, than with either race pure; as I have them transiently "fixed," and that it will pay me much the best, even if I have to *fix* them all the time. I am of the opinion that had I any pure strains of any race of bees known, that I should "fix" them as long as I kept them. The report that tells of my saying that the light Italians are better-natured than the dark ones, is an error, for I did not, and I have always maintained that the dark ones are the best behaved bees of any pure race, and that the crosses between these and the brown bees are equally as well behaved. I am sorry you should have come out at the sight of a shadow, when the same time and space might have been devoted to "How to Market a Large Crop of Honey."

I think it was Mr. Demaree that told us that the Italians were hybrids themselves. Well, if they are, being composed (as they must be *a la D.*) of "several races," there may be a chance for me to "get there" yet. Mr. Shuck accounted the impoverished, honeyless condition of his bees, at one time of year, to the season, and then a result, with *any* bees, proved a honey shower, and credited the latter result all to the stock. His first statement disproved the last, and the last proved too much, or nothing. Did it not?

Mr. Demaree tells us that crosses sport so much that they are liable to fall back to worthlessness (if they do not fall below the worth of the brown German strain *I* started with, I will stand it, well), because they are not (like the pure races) "fixed," yet Mr. Shuck proposes to breed up his coming bee out of this *fix*edness. I will leave Messrs. Demaree and Shuck to settle this between themselves.

In the tenth paragraph of Mr. Shuck's reply to me, he says that my "theory (it is really my practice) looks well on paper, but in practice it presents quite a different picture;" and then, to prove it, cites us to his failure with a *pure* queen, imported from Italy, selected at that, during the years 1880-81.

Several have written me to ask if I should reply to Mr. Shuck. Mr. Snyder, of Clarksville, writes me: "Shuck is right after you; I think you will have to give up your coming hybrid bee," and, in the next line, he says: "I am quite a poultry breeder, and I am producing a cross between two distinct pure breeds, which I think much superior to either pure race, and I could give good reasons for my coming fowls?" Mr. Demaree will please correct Mr. Snyder. Had he not better add a blue jay or red fowl to his crosses?

Well, the reason I had not replied to Mr. Shuck was because I could see no argument to reply to. When his article came, I was entertaining an old queen and bee breeder and honey-producer (second to none in America, in my opinion), and we read the article together and neither of us could see what I was going to "hit at," and it lames my muscles to strike into the air and hit nothing.

But, really, is it not a matter of demonstration? Must we not let the utility of the bees by all who use them, decide the matter? I fancy I hear an accord from Messrs. Hutchinson, Oatman, Miller, and a whole host of men, who are known to "get there" early and often, saying, with our worthy editor, "the coming bee will have the right number of yellow bands, be it one or many?"

I may be too grossly practical, but I feel something like the practical old lady, who, after doing her full share of amassing a fortune from the dairy, hennery and farm, took her big, awkward son "Eli" to the fair, to run to a 20 rod post and get off the $5 gold piece first. When on his race, and nearly been led by numerous competitors, the old lady, who stood by in breathless suspense, cried out, "do not jump so high, but GIT THERE, ELI."

Please excuse me if I put more confidence in the opinion of bee-keepers who *get there* than in those who do the *high jumping*. The ink of imagination has no affinity for the ear of experience.

Dowagiac, Mich., Jan. 5, 1883.

For the American Bee Journal.

Wood Separators for Surplus Honey.

C. R. ISHAM.

MR. EDITOR:—By to-day's mail I send you a few *wood separators*, the same as we have used in our apiary during the past season, and of standard thickness, one-sixteenth of an inch. I put one or two into the package, which have been in use, that you may the better judge as to their practicability for the purpose of securing straight combs with smooth, even surface.

In an article published in your JOURNAL a short time ago, Mr. F. C. Benedict gives the experience of himself and neighbors who have used wood separators, more or less, for several seasons past, all of whom are among our most experienced and successful honey-producers, and follow bee-keeping for profit more than pleasure.

Mr. Benedict's article on "Half-Pound Sections," marks him as a writer possessed of good judgment and who knows what he is talking about.

He has had experience with wood separators and half-pound sections, and those contemplating a change in their surplus arrangements to conform to what just now seems to be a "popular idea." may do well to pause and consider awhile, before making the proposed general alteration.

I will here remark (although we have high authority to the contrary) that for us to think of dispensing with separators for surplus honey would be like going back to old box hives, minus brimstoning the bees.

I will now give a few brief reasons as to why I am strongly in favor of using some kind of separator for sectional boxes.

First, When wood is used, the bees do not travel as much over the honey, preferring to cling to the separator, especially when the nights are cool and honey is coming in slowly; consequently the combs do not get so badly soiled, as when used for runways or to cluster upon.

Secondly, We can get just as much honey with, as without them, and have the sections evenly filled, giving them a much nicer and more attractive appearance, which is always appreciated by the connoisseur.

Thirdly, If we are in the habit of glassing our honey,—they are simply indispensable.

Fourthly, That those of us who like to take off the filled sections as soon as capped, and move the unfinished ones to the center of the rack, would have a troublesome job without separators between the sections, for, while some combs would rub against each other, others would be too far apart, making the whole operation a trying ordeal.

Fifthly, Upon general principles to have the combs built just as we want them, believing that straight combs are more attractive than crooked ones, whether or not we may wish to use glass—and that the cost of separators are nothing in comparison to benefits received.

We want our honey in shape to command the highest market price and give the best satisfaction to the consumer—believing that a white basswood section, well and evenly filled with honey, is an article of "beauty" and a "joy" to possess—better than wheat, for it can the more readily be exchanged for gold or greenbacks and at a far more remunerative price.

Peoria, Wyoming Co., N. Y.

[The samples of separators are received, and some of them look as though they had done excellent service. We do not believe that those who are producing a fancy article of comb honey can afford to dispense with the use of separators. We think they are indispensable; with very careful work some may do without them for a time, but, for producers of comb honey in general, they cannot be dispensed with,—without costing more for extra time and care, not only while sections are on the hive, but in crating for market, than their entire cost, each season.

For many reasons wood is preferable, and when cut so nicely as are those sent by Mr. Isham, we can see no objection to their use.—Ed.]

For the American Bee Journal.

Bees Removing Eggs.

O. E. COOLEY.

"Do bees remove eggs from one cell to another?" Yes; and from one comb to another, sometimes. A colony of mine lost its queen, about July 1st, and after waiting a sufficient length of time for them to have reared another, I gave them a frame of brood, containing brood in all stages, from the egg to hatching bees. I let it remain until all of the brood had been capped, at least two weeks; in fact, most of it had hatched out, but there was no queen cells built on it, and no queen in the hive.

Again I exchanged frames, putting back the frame first taken from the queenless hive, which was now again full of brood in all stages, but still the bees built no queen cells on that frame, nor on the frame next to it, on either side. I thought it useless to do anything more with them, and thought I would wait, and, perhaps, Mr. Alley would fill an order for a queen that I sent him, and paid for, over three years ago, but the queen did not come. About six weeks after giving the last frame of brood, I discovered that the hive had a queen, and was filled with brood. The bees must have moved an egg and built a queen cell in some other part of the hive, or the queen could not have been there.

Ridgeway, Iowa, Jan. 2, 1883.

For the American Bee Journal.

Our Honey Resources.

W. H. STEWART.

Some are of the opinion that 100 colonies of bees are as many as can be made profitable within a radius of five miles, while others believe that each inhabitant of the rural districts might keep 100 colonies to advantage, as far as pasture is concerned. We are not aware that any one has ever demonstrated practically, that either opinion is well founded. You cannot expect me to give my views, in full, on this question, in one short chapter, but I will just give a hint, and leave the matter for further consideration.

I hold that all animate life is governed by the same universal law, from which there is no divorce. The law that dictates that one class of beings shall live by the sweat of their brow, is just as arbitrary to every other class of living creatures.

Very much of the work of the bee is done in the night; much is done in the swamps, on the mountains, and in the forests, and even that portion of her work that is done in our immediate presence is by us, by no means fully understood.

Her cut is so slight, her blow so light,
And given in such rapid succession,
Our nerve is so slow, 'tis but little we know,
By our most labored observation.

The two planes of life, occupied by the honey-bee and the human family are widely separated, and in the nature of things we can comprehend about as much of her plane of life as she can of ours; very little more. Yet, as both are subject to the same law, when we learn how we can obtain from the nectar-secreting plants, a portion of their choice sweets, then we have obtained a reliable key that unlocks the dark mystery that would otherwise conceal very much of the labors of the honey-bee from our vision. If we would know the resources of the honey-bee, we must first learn our own resources for obtaining wealth.

We have learned, by experience, that our stores are only born of labor, and that the measure of stores corresponds to the amount of labor that we are able to accomplish; and, further, that the better and more advantageous our surroundings are the more labor are we able to accomplish in a given time. As man is able to accomplish more under favorable conditions, even so is it with the honey-bee. If we allow them to increase their number of colonies by natural swarming, then it is highly probable that much of their time in the height of the honey season is consumed in preparing a new home in some old hollow tree. And, again, if we detain the swarm, and give them no better home than a straw basket or empty rough box, they must labor through the whole season to prepare their rude home for the coming winter. But if they are properly divided, and the new colony given a good frame hive, filled with sheets of brood-comb, or even sheets of comb foundation, they are often found able not only to prepare for winter, but to give us large yields of surplus honey. Thus we perceive that favorable conditions inside of their home is, in reality, a honey resource.

The life of the bee in the working season is only six weeks, and it has been proven during the last season, by Jerome Wiltse, Falls City, Neb., that she is *able*, and *does* gather *honey* from the field at the age of six days after hatching, if surroundings are favorable; and then she has but five weeks more that she can work.

Now, we come to a most important question, viz.: "What is the bee to work at during this five weeks?" Is she to build combs for brood and storage? Is she to stand guard at her door to protect what little she has against robbers? Is she to be tormented out of her wits, by being stifled with smoke, and having her nest all torn to pieces every day or two, by unwise bee-keepers; or will we prepare and protect her home, and let her gather honey all the remaining five weeks of her life?

I have stated that human life is a key to the life of the bee. If we were in want of maple sugar, how would we act? We would first prepare storage and means of evaporation, and, when all was ready, we would cut the fiber or *cells* of the tree, to make it leak its sap. Then we would gather the sweet sap as it leaked from the wounded tree, evaporate the water from it, and have the desired amount of sugar.

If we desire to obtain cane sugar or syrup, when our storage and evaporating fixtures are in order, and the cane is in proper condition, we *cut* and *crush* the cane and force from it the sweet juice, evaporate the water and retain the nectar. I apprehend that some are beginning to see the point and ask if I believe that the bees must go to the forest, and cut bleeding wounds in the trees, forcing them to leak out a portion of their sap, and surrender it up to be carried away and evaporated by the bees. And, in reply, I answer yes; most assuredly do I believe it. I know of no law that would guide the maple or cane, to pour out, *unbidden*, its sweets to the bee, and at the same time withhold it from man.

If the bee would have honey, she must first have her house, workshop and storage room in order, and when any one or more of the classes of plants are in proper condition, at the proper stage of their new growth, she must find where the plant has by accident or otherwise been wounded, or find some of its most tender points and inflict the wound, as best she can, and then gather home and evaporate what leaks from the wound that is made. I hold that bees wound the bloom of clover, buckwheat, linden, and, in fact, all other plants before they are able to extract from them the desired sweet.

This being true, then all must admit that a proper condition in and about the home (or hive) of the bee is one of the greatest resources for honey. *Webster's* first definition of the word (*Resource*) is as follows: "Any source of aid, or support; any expedient to which a person may resort for assistance, safety, or supply."

Mr. H. M. Morris, of Rantoul, Ill., lives where there is more corn than other honey-yielding plants, and his bees store large quantities of corn honey, each year. He finds that bees work very lively at the base of every leaf, and at every joint from top to root of the stalk. The truth is, that the rind of the stalk is the most tender at those points, and the bees mutilate the rind, making the stalk bleed, and then gather the sweet fluid. Who can tell how much sap 1,000 acres of corn could spare for the honey bee? Who can tell how severe trimming white clover is able to endure, and yet bloom on and on, in newness of life and beauty? We know that it thrives best, in our stock pastures, where it is subject to the most severe pruning. Who knows but it would be acting true to its nature in yielding a hundredfold more sweet, if it were cut and scared by a hundredfold more bees? If white clover had been plenty near the bees of Mr. Morris, they would most likely have worked on that, and have paid but little attention to the corn.

Again Webster says: "An enterprising man finds resources in his own mind." Allow me to ask horticulturists where they find their resources for choice fruits? Is it not in their own mind? You must tear the little seedling tree, root and branch, from the bosom of its dear old mother earth, and then cut off its little tender head, and wax on to its shoulders the head of a stranger, then transplant, cut off its limbs and continue to cut and scar, until you have finally forced it to present to you the delicious fruit. The resource for this fruit is in the enterprising mind!

Who can say that our resources for honey are any more hidden, or limited, when touched by the hand and genius of an enterprising people, than are our resources for the choice grains, fruits and flowers?

Then kindly treat the queen of sweet,
  Give her a cozy home;
Each part complete, and keep it neat,
  From bottom floor to dome.

Of pure fresh air, give her a share,
  But not too hot or cold;
Adorn her home, with nicest comb,
  Of the most perfect mold.

Her days are few, 'tis very true,
  But keep her on the wing;
She loves to scale the floral hill,
  And choicest treasures bring.

With hand and brain, do all you can,
  And blend your life with hers;
Resources vast, you'll find at last,
  In all the coming years.

Richland Co., Wis., Jan. 10, 1883.

For the American Bee Journal.

The Standard Langstroth Frame.

M. M. BALDRIDGE.

The season for making hives being again at hand, it may be well to call attention once more to the proper dimensions of the Langstroth standard frame. The proper place to find the exact measurements of the standard frame is in Mr. Langstroth's work on bees, where he gives explicit directions for making his hive. I will now copy from the 3d edition of his book, page 372, what he says about the frame, to wit: "Top, 19⅛x1⅛x5-16 in.; bottom, 17⅜x⅞x¼ in.; ends, each 8⅝x⅞x½ in." As the bottom should be nailed to the end pieces the outside length of the standard frame, as given by Mr. Langstroth, himself, is 17⅜ in., instead of 17⅝ in. as given by some of his pretended followers. The space between the ends of the frames and the hive is given by Langstroth as ⅜ in. This makes the hive 18⅛ in. from front to rear, inside measure. The space above the frames is 5-16 in., and under them, ½ in. The inside width of the hive for 10 frames, is 14⅛ in.

It seems to me that the exact length and depth, outside measure, of the standard frame should be strictly adhered to by all parties making the same for their own use or for the public. Should this be done, the following modifications of the standard frame will do no harm, to wit: I make and prefer said frame as follows—top piece 18¾x⅞x5-16 in.; bottom piece 17⅜x⅞x¼ in.; ends, each, 8⅝x⅞x⅜ in. Experience has demonstrated that the top piece should not be more than ⅞ in. wide. I find that 5-16 in. space at ends of hive, ¼ in. above the frames, and ½ in. under them, is just about as near right as we can get it.

This requires accuracy in getting out the hive material, but when the machinery for making hives is as it should be, and properly adjusted, it is just as little work to cut out the stuff accurately, as otherwise. No bungling mechanic has any business to make hives for the public, nor for himself either. I rather mistrust that we are indebted to Mr. Bungler for sending out sample hives for others to copy from, and that this explains why there are so many 17⅝ in. frames in use for standard frames.

But there must have been more than one bungler at work to explain the following extract from a letter recently received from the makers of the Given Foundation Press, to wit: "In regard to standard Langstroth frames, we have received sixty (60) different orders for them, and we find but two alike! They vary from ⅛ to ½ inch." Now this shows that the makers of hives are simply following Mr. Bungler, or else their own notions, and not any accurate formula, such as is given by Mr. Langstroth. There should henceforth be a change in this matter or else the subject and importance of a standard frame should be dropped altogether.

St. Charles, Ill.

For the American Bee Journal.

Experiments in our Apiary.

D. VIDETO.

The past season, though conceded to be a poor one in this section, has given me very satisfactory results. The average product per colony has been about 40 lbs. and the average profit a little over $5. Very little attention was given to the production of comb honey, as it sells little or no higher in our market than extracted, and we have never yet discovered methods by which we could so produce it as to make it profitable at any reasonable price. We have tried all the popular methods for producing comb honey, and never yet found the colony that would produce one-third as much comb honey as it would of extracted.

Since learning, through the very kindly instructions of Mr. James Heddon, how to wire frames and put foundation into them, I have been able, at least, to attain entire satisfaction on this point. It is due, perhaps, to say that I have improved somewhat upon Mr. Heddon's method, which is recommended to persons having no press. Instead of pricking the wires into the foundation, "cell by cell," I have arranged a handle to a brass clock wheel about two inches in diameter; this is run lengthwise of the wires, pressing it down into the wax. I had almost concluded that I should be compelled to purchase a foundation press, more particularly that I might work the foundation on to the wires, but after such experience have dis carded the necessity of a press for this purpose, as I can run off a large amount of work in a short time, and in every respect satisfactory.

Of course, there is no difficulty in finding persons who will manufacture and sell the very best samples of comb foundation, and as long as such shall be found in the market, there seems no need of a machine, unless working up wax is remunerative. I have been really delighted with my success in wiring my frames and putting on foundation.

I have also been trying some of those condemned dollar queens. It was very easy to see, on their arrival, that they were *forced*—too small and feeble looking, to insure much promise of profit. They were introduced, however, and thus far have given tolerable satisfaction. My experience has been that queens from such, during the swarming season, are all that may be desired.

We are strenuous in our praises of the Italians, and consider them much superior to the blacks in disposition and honey-gathering qualifications. The "Coming Bee" with me, thus far, has been some Italians and as many hybrids. I am disposed to agree with Mr. Heddon, that the best bee is the one that will produce the most honey. Extreme gentleness is conceded to be a characteristic of the Italians, a trait of character which I very much admire, but fear we all are sacrificing the honey-gathering qualities too much to secure it. I have no better bees than some cross hybrids.

North East, Pa., Jan. 9, 1883.

For the American Bee Journal.

Comb Honey Surplus Arrangements.

LEROY WHITFORD.

I have taken great interest in the half-pound section movement, as manifested in the discussions of the conventions, and especially in the BEE JOURNAL. The subject has been so thoroughly ventilated that it has no doubt already taken shape, to be carried into practice in many apiaries, and yet I can but regard it as an unwarrantable extreme, and that whoever undertakes to run a large apiary for comb honey in half-pound sections will have occasion to swing back to the golden mean.

Its advocates teach that it must be adopted or rejected *in toto*, as it never will do to have two kinds of sections in an apiary. Now, while it is admitted that the demand for larger sections will continue (even for the two-pound), the idea seems to be that one must produce the one-pound package, and another the half-pound.

Dr. Miller says that if he knew that all others were adopting these two styles, he should continue to use the two-pound sections. This means that the retailer must keep in stock, honey from three different apiaries, to meet the wants of his different customers.

It strikes me, that I, as a producer of comb honey, should meet the demand with different weights, as the extracted honey-men have, with the pails of different sizes. I am the more anxious to do this, when I remember that the half-pound buyer this year will, most likely, be the two-pound buyer next year.

I have invented—do not be frightened at the word, for it will not be patented—a case which is readily adapted to the half-pound, pound or two-pound sections, or it may be used for two or three styles in the same case, and separators are used more conveniently than on any other arrangement; and I think I know what I am talking about, having "tried all things" and found nothing good enough to "hold fast."

I dislike the broad-frame and have studied for two years to get rid of it, and still retain the separators, for I consider them indispensable. The out-come is a surplus arrangement which I have used on 20 hives during the past season, with great satisfaction, as it facilitates the manipulations very much and does away with a lot of bulky "traps," which clutter up the shop and store-room.

The improvement which gives me these advantages I will call a "section sill" made of tin. I take a strip of tin 1⅛ in. wide and fold it lengthwise. Then crimp the two edges at right angles, ¼ in. each, giving it the form of the letter **T** (sectional view); the lower part being double and the top single. Now, take another strip 13-16 in. wide, and put it into the **T**-shaped piece, and settle them together solid, with a hammer, and prick the sides so that the middle piece cannot get out. The case is simply a square box without bottom, but an inch band is nailed around the bottom. For pound sections a kerf is sawed into this band 4¼ in. from the sides into which this sill is pushed. It should go tightly, and will, if a fine back saw is used; now, suppose you put in the two outer rows of sections, the outer ends will rest on the band and the inner ends on the tin sills. Now, take the tin separators, cut to the right length to reach clear across the case, and drop them in between the sections. They will rest on the upper part of the sill just right for the bees to work under and over them in the usual way. But the middle sections are not provided for. For two more tiers of sections you have only to take a strip of tin 1¼ in. wide, and bend the edges down at right angles 5-16 of an inch, and drop it into two saw kerfs at each end, 4¼ inches from the sills.

If it were desirable I could use sections in the middle 8½ inches long, holding 2 pounds, or I can space for Heddon's 2 13-16 in. sections and these sills can be moved in a moment to accommodate one or the other. It makes no difference what thickness of section is used, the separators will fit them, if you use 2 inches or one. Of course, the tin sills rest on the frames crosswise, and the bees have the freest possible access to the supers. You would be surprised to see how easily they lift off, and how easy it is to clean the tins in the wash boiler.

I have made a long story, and yet I fear I have not made myself understood, so Mr. Editor, I will send you a sample of those tin sills which will aid your comprehension.

Fearing that I have already made my communication too long, I will only say in closing that I shall, the coming season, offer my customers half-pound and pound sections of honey in the same case, and fitting, mixed in the same shipping crates, and test the market, but to produce all half-pounds for hotels—my principal market—I am sure would be a great mistake.

Stow, N. Y.

[The samples of "tin sills" are received, and, from the above description of their use, we have no doubt of their utility. It is a matter, however, that must be decided by those who use them. Two tin sills are sent to us; one with a rest to support the separators, and the other is a plain, cheaply-made one for the middle sills. They are placed in our Museum for the inspection of visitors.—ED.]

For the American Bee Journal.

A Few Odds and Ends.

T. F. BINGHAM.

The report of the Northwestern Convention at Chicago, Ill., shows that 70 members were present; of whom 32 took part in the discussions.

By a careful review of the secretary's official report of the North American Bee-Keepers' Convention, there is circumstantial evidence that there were present at the meeting 18 persons. Of these, 11 took part and said something. Twenty-seven reports appear from different parties (seven of these persons' names appear as a part of the eleven as taking part in the discussions). Judge Andrews, of Texas, and Dr. Blanton, of Mississippi; in fact, all the far-off delegates do not appear in the report as having taken part in the discussions.

On page 665 of the BEE JOURNAL for Oct. 18th, is a letter giving circumstantial evidence that two others, not elsewhere reported, were present. These two added to the 18 reported by the secretary would swell the report of the North American Bee-Keepers' Convention, for 1882, to 20. The letter above referred to gives some further light, which may add to the number 4 ladies, who took the lead in a carriage, in the trip to Mt. Healthy. By a strict construction, this would add two not elsewhere reported. Thus our bee-keeping friends in England, Germany, etc., when they read the report, saw that there might have been 22 persons in convention assembled at Cincinnati, Oct. 3, 1882.

Mr. Muth must have written that letter after the best spirits (of which he speaks) had departed, or he would not have so mixed up the sexes in the "crowd," or construed what I said as reflecting on him. I merely said "That the lingering of foul brood about Cincinnati ten years, might be regarded as evidence against curing it by medication."

"Mr. Heddon as a specialist," page 18 of the BEE JOURNAL for 1883; this is liable to misconstruction. The fact of his getting such returns, as a novice, is full of encouragement for beginners, and is a concise commentary on his criticism of "Blessed Bees," in the same issue. Mr. Heddon's incongruous sentence, referring to "capacity," on page 20, of the January number, illustrated capacity for cruelty; but when he went further and gave a test by which one could decide whether he was "more experienced," etc., he illustrated more. It may be clear to him how one can write four times and not think once; if so, he may well say apiculture has progressed.

I am very glad J. C. Newman & Son gave their practical experience in half-pound sections; their size, with separators, and their sale when offered in large quantities, settles at once all theories. Goods of most kinds are sold in "lines," differing in size and quality, and if bee-keepers should follow the same plan and use such sized section as each one thought best,—the market would soon determine whether various sizes were most salable,—or whether only one—and which one.

Abronia, Mich., Jan. 15, 1883.

For the American Bee Journal.

Bee and Honey Statistics.

S. B. ATWATER.

During several months past, I have read a great deal of what has been said on the subject of collecting apiarian statistics, by correspondents of the bee papers, and in the reports of the discussion of the question by the various bee-keepers' conventions. I do not remember seeing anything stating that any statistics on the subject were being collected, anywhere in the Union, at State expense. For some time I have looked for some farmer in Illinois to write to the AMERICAN BEE JOURNAL and volunteer the information that the Town Assessor, last spring, not only asked him how many head of fat cattle and hogs he marketed; how many tons of hay, bushels of wheat, corn, oats, rye, apples, potatoes, etc., and how many pounds of butter and cheese he produced; but that, for the first time, he asked him something about his bees.

Can it be that all the farmers have forgotten it? It is possible; for in fact I had forgotten just what was asked. But I think only one or two questions were asked, and perhaps these are not the same the committee on statistics are now asking through the bee papers.

I send you herewith a copy of the Illinois law to be found on page 3 and 4, "Laws of Illinois, 1877," and call the attention of the committee on statistics to what is said in the second section of this act about the power of the Board of Agriculture to add to or omit questions from the blanks furnished the Assessors. If more questions are desired by the bee-keepers, no time should now be lost in bringing influences to bear in making a change as the Secretary of the State Board of Agriculture delivers the list to the State Auditor on or before the first day of April of each year.

AN ACT to secure the Collection and Publication of Agricultural and OTHER Statistics. Approved and in force May 25, 1877.

SECTION 1. Be it enacted by the the people of the State of Illinois, represented in the General Assembly, That it shall be the duty of the Secretary of the State Board of Agriculture to prepare and deliver to the Auditor, on or before the the first day of April in each year, forms and blanks similar to those used in the assessment and return of property, one or more copies of which forms the State Auditor shall send by mail to the County Clerks of the several counties on or before the date aforesaid for their information and guidance.

SECTION 2. It shall be the duty of the County Clerk of each of the several counties to provide schedules and blanks according to the forms provided by the Auditor for the use of Assessors and Deputy Assessors in the same manner and at the same time as is or may be provided by law for the assessment of property, to cause such census schedules to be filled by all persons within their respective assessment districts in possession of property, concerning which, information is required by this act. Such schedule shall truly and distinctly set forth the number of acres he, or she, or they may have had the preceding year in fall wheat, spring wheat, corn, rye, oats, barley, buckwheat, castor beans, beans, peas, Irish potatoes, turnips, and other root crops, and the number of each produced the preceding year; the number of acres in timothy grass, and the number of tons of hay and bushels of seed produced therefrom the preceding year; the number of acres in clover, and the number of tons of hay, and bushels of seed produced therefrom the preceding year; the number of acres in cotton, and the number of pounds of lint, and the number of bushels of seed produced therefrom the preceding year; the number of acres sown in flax, the number of pounds of fibre and the bushels of seed obtained therefrom the preceding year; the number of acres planted in tobacco, and the number of pounds produced therefrom the preceding year. And the Secretary of the State Board of Agriculture shall have power, after the first year, to add to or omit from the foregoing schedule such items as the State Board of Agriculture shall designate.

SECTION 3. It shall be the duty of all persons owning or in possession of property concerning which information is required by this act, to make out and deliver to the Assessor at the time fixed for the listing of property for taxation a schedule as aforesaid, properly and correctly filled, and it shall be the duty of said Assessors or Deputy Assessors to properly fill and add up the blanks and schedules aforesaid and to return the same correctly footed up, to the County Clerk at the same time and in the same manner as is now or may be required for the return of assessments.

SECTION 4. It shall be the duty of the County Clerk to revise, correct, tabulate, and foot up the statistical returns made to him by the Assessors or Deputy Assessors of organized townships in counties under township organization, and of congressional townships in counties not under township organization, and to transmit to the State Auditor with his return of the assessment of the county, an abstract of the agricultural statistics of the county in the form required by the schedule and blanks furnished by the Auditor; and it shall be the duty of the Auditor to transfer without delay such abstracts to the Secretary of the State Board of Agriculture, who shall revise, correct, and compile the same, and publish the results in the annual report of the transactions of the State Board of Agriculture, for the year or years in which the statistics were collected.

I would further suggest to the editor of the AMERICAN BEE JOURNAL that whatever information there may have been collected by the thousands of Assessors in this State on this subject, last year, can probably be had by addressing a line to the Secretary of the State Board of Agriculture, Springfield, Illinois. If the statistics are already published, a copy, perhaps, can be obtained by addressing the member of the legislature from your district.

Viola, Mercer Co., Ill., Jan. 8, 1883.

[As suggested by Mr. Atwater, we have made application for any statistics that may be in the hands of the Secretary of the State Board of Agriculture, and a Table furnished by him may be found on page 51 of this issue of the BEE JOURNAL.—ED.]

For the American Bee Journal.

Are Separators a Nuisance?

A. L. GOULD.

I send my opinion, in compliance with Mr. Caldwell's request.

The more I handle bees, the more I am convinced that they have a good deal of human nature about them; or more correctly, that they possess some qualities in common with man; and that it is much easier, in dealing with bees, as in dealing with men, to *coax* them to do well, than it is to *drive* them to do so. In compelling them to build uniform combs in small sections by the use of separators, you disregard their instincts, and they will spend much time in pouting, sometimes leaving whole sections untouched, and hang out on the outside of the hive. But coax them to do reasonably well, by putting 4 sections, side by side, with nothing between, with a starter of clean white comb in each (I have not used a scrap of foundation during the past season), and, finding room to cluster, according to their instincts, they will at once take hold of the four combs and build them down together, and finish them straight enough to pack.

We have packed 10,000 pounds of honey in the comb, this season, and much the larger part of it built without separators, and have not been obliged to lay aside half a dozen combs for the home market. Some of them were more than full, and some not quite straight; but by putting such ones next a thinner one, all went in without touching. And the inconvenience of packing is not worth naming in comparison to the bother and loss attending the use of separators. We have worried with them several years, because the authorities recommend them; but we shall do it no more. We have shaken off the nuisance and cut up the tins for other purposes.

January 11, 1883.

For the American Bee Journal.

Separators of Wood.

E. H. FINCH.

In the BEE JOURNAL of Dec. 27, page 820, is an article on wood separators. Now I claim to be the first person in this country that adopted the wood separator, which I did five years ago. The idea first suggested itself to me, by being in a factory in Geneva, Ohio, where I then lived, where they manufactured wood ribbon from a round log, rolling around, and a knife set to take off any thickness they saw fit for fancy splints, tooth picks, etc., being cut into narrow strips afterward. The thought struck me that it might be cut into strips of the right width and length, and tacked on the section frames, and answer a better purpose than tin. I also bent some 1-lb. honey boxes out of it, lapped the ends and fastened them with glue; that was when we were using dovetailed boxes. I ordered several hundred yards of the material, cut to a thickness according to the sample I enclose to you. I also sent a sample to I. B. Haines, of Bedford, Ohio, who spoke very favorably of it in a letter to me. I have used it for separators ever since, and prefer it to tin. I never have been bothered with bees "bracing" any more than with tin, and they never run over the comb with it. The cost is not over one-fourth of that of tin, and mine has not me over one-eighth as much. I can put it on as fast as I can tin separators, by cutting it with a penknife to the size, and tacking each end with 4 small wire nails, 2 at each end. If you change it every season, it will not cost one-half as much as tin. Not being anxious to appear in print and having very little time to write I have never mentioned it before.

I have 50 colonies of bees, but I have had very little increase and very little honey during 1882; no one in this section of the State has one-half a yield, and very little increase. I have sold all my honey at home. I took the first premium at Summit county, O., agricultural fair on bees, honey and hives; what I call the improved Langstroth with improved surplus, holding 28 one-pound boxes. I find they work better than with 56 boxes, as most parties use them.

I also have an improved entrance for controlling robbers, which I consider better than anything I have ever seen; I can stop robbing in one hour in nearly every instance.

We live in hopes of a better season during the coming honey harvest. No one here has any more than paid expenses, and many not that.

Bees are having dysentery badly in this section, from honey dew. We think some have suffered quite badly; there was a profusion of honey dew late, and bees just swarmed the woods after it.

I like the old BEE JOURNAL, but I do not take much stock in those large yields published. I will give these parties $500 in cash to instruct me how to obtain one-half that quantity and pay all expenses besides. I suspect that it was not weighed on standard scales.

Sharon Center, Ohio, Jan. 8, 1883.

For the American Bee Journal.

Western Bee-Keepers' Convention.

Upon previous notification, a goodly number of persons interested in apiculture, of Jackson and adjoining counties, met at the court house in Independence, Mo., Dec. 23, 1882, for the purpose of organizing a bee-keepers' society. A permanent organization was effected by electing J. A. Nelson, of Wyandotte, Kans., president; L. W. Baldwin, of Independence, vice-president; S. W. Salisbury, of Kansas City, secretary; and P. Baldwin, of Independence, treasurer. After some discussion, the following articles were adopted:

1. This organization shall be known as the Western Bee-Keepers' Association.
2. Its object shall be to promote the interests of bee-culture.
3. The officers of this association shall consist of a president, vice-president, secretary and treasurer, and be elected by ballot for the term of one year.
4. The president, vice-president, secretary and treasurer shall constitute an executive committee.
5. Any person may become a member of this association who shall subscribe his name to these articles and pay into the treasury the sum of one dollar. Ladies free.
6. Each meeting of this association shall be at such time and place as may be decided by a majority vote.
7. These articles may be changed or amended at any regular meeting by a two-thirds vote of the members present.

Owing to the lateness of the season the exhibits were few, although there was displayed a very fine package of honeycomb by L. W. Baldwin; also extracted honey from the apiaries of F. J. Farr and Jonanthan George.

Mr. Salisbuary stated that the tendency, especially in the east, was for smaller packages of comb honey, weighing not more than one half-pound, as having a ready sale at a higher price and more satisfactory for general use.

L. W. Baldwin thought that one pound packages were small enough for practicle use, as the change of apparatus, etc., of the apiary for procuring honey comb in smaller sections would be accompanied with great expense. He stated that he had sold his crop of comb honey the present year, put up in 1¾ pound sections, at 23 cents per pound in the Kansas City market.

There was represented at the association about 1,000 colonies of Italian bees and 26,000 pounds of honey distributed among the different members as follows:

Name.	Spring.	Fall.	Extract.	Comb.
Jas. A. Nelson	47	63	700	
J. D. Meador	25	55	1,000	
C. M. Crandall	52	73	1,200	1,000
S. D. Gregg	34	50	1,200	
F. J. Farr	95	146	1,500	4,000
J. H. Jones	40	105	700	2,000
L. W. Baldwin	150	207	2,825	3,175
P. Baldwin	130	145	900	4,000
S. W. Salisbury	64	100	2,000	500
E. M. Hayhurst		110		
Total	637	1,054	12,025	14,675

F. J. Farr, J. H. Jones and L. W. Baldwin winter their bees in cellars; all the rest winter them on the summer stands. E. M. Hayhurst is principally engaged in queen-rearing.

All bee-keepers within reasonable distance are invited to join or attend the meetings and help in bringing the bee-keeping interest more generally before the public, advance the production and extend the markets of its product. An invitation is also extended to all ladies interested in any way in bee-culture to be present and take part in the discussions of the association.

After a vote of thanks to the county papers and officers for favors extended, the association adjourned to meet at Independence on the last Saturday in April, 1883, at 10 o'clock a. m. P. BALDWIN, *Sec. pro. tem.*

Convention Notices.

☞ The Northeastern Ohio and Northwestern Pennsylvania Bee-Keepers' Association will meet at Andover, Ohio, to hold their annual convention, on the second Wednesday and Thursday of February, 1883.

C. T. LEONARD, *Sec.*

☞ The Western Bee-Keepers' Association meets at Independence, Mo., April 28, 1883.

S. W. SALISBURY, *Sec.*

☞ The Texas State Bee-Keepers' Association will hold its Fifth Annual Convention at McKinney, Collin Co., on Tuesday and Wednesday, April 17th and 18th, 1883; at the residence of Hon. W. H. Andrews.

WM. R. HOWARD, *Sec.*

Kingston, Texas.

☞ Articles for publication must be written on a separate piece of paper from items of business.

SELECTIONS FROM OUR LETTER BOX

Growing and Satisfactory.

I began bee-keeping in 1879, with 1 stray swarm; in 1880 I procured chaff hives; in 1881 I had 5 colonies in chaff hives; in 1882 I increased them to 28 colonies, mostly by dividing, and obtained 2,000 pounds of extracted honey, and 500 pounds of comb honey, and sold all of it at 12 and 16 cents per pound. A. MOTLAY.
Ottawa, Ill., Jan. 16, 1883.

"Nothing but Leaves" for Packing.

I had, in the spring, 5 colonies of hybrids and blacks, spring count; by natural swarming and dividing I increased them to 17 colonies; sold 1, and 2 colonies left me for parts unknown, leaving me 14 colonies packed in leaves. I obtained 375 lbs. of comb honey, and 75 lbs. of extracted. The above amount was received from 9 colonies. In Italianizing, they killed and lost 6 queens, which left me 4; with loss of time and delay, I can safely say that I lost 200 lbs. The 14 colonies in winter quarters have 50 lbs. of honey in each hive.
S. J. MCKENNEY.
Burlington, Iowa.

Statistics for Canada.

I would ask whether Dr. C. C. Miller wishes for statistics from bee-keepers in Canada as well as the States? Perhaps other readers of the BEE JOURNAL besides myself would like to know. H. F. BULLER.
Campbellford, Ont., Jan. 13, 1883.

[Of course Dr. Miller wants statistics for Canada as well as the States. Canada is rapidly advancing in bee-culture, and it will be quite interesting to know what she is doing.—ED.]

Binder for the Journal as Protection.

I think that the present "make up" of the WEEKLY BEE JOURNAL can hardly be improved; certainly not as suggested by Dr. Mason, for the reason that we want the advertising as well for reference as the rest of the reading matter, at least, as far as I am concerned. I would very much object to the soiling of any copy so that a part of it has to be thrown away. Let those who wish protection get one of the binders for the BEE JOURNAL. A. R. KOHNKE.
Youngstown, O., Jan. 18, 1883.

Wintering in Chaff and in the Cellar.

After receiving all my numbers for 1882, and looking them over in the Emerson binder, I can hardly refrain from writing to thank the editor and the many correspondents for such an excellent instructor in the art of bee-keeping. Last spring I had 4 colonies of Italian bees (2 being strong and 2 very weak); they increased to 10 strong colonies by natural swarming. The increase all came from 2 colonies; and I took 120 lbs. of comb honey from them. I could have taken a quantity of extracted, but had no extractor, so thought I would keep it for spring feeding. After the honey season was over I sold 2 colonies, and bought 16 Italians and hybrids in Simplicity hives, at $5 per colony. I packed 10 in sawdust, and 6 in chaff; the other 8 I put in the cellar. They are all alive yet, but I cannot tell how they will come out. I thank Mr. Heddon and Mr. Doolittle for their able articles in the BEE JOURNAL. These articles alone were worth more to me than the subscription price of the JOURNAL. We have had a pretty solid winter since November 23. The coldest being 13° below zero. HENRY CRIPE.
N. Manchester, Ind., Jan. 18, 1883.

An Old Fogy Bee-Keeper.

A neighbor of mine, who keeps bees, had a swarm of bees cluster on the body of a very fine and large apple tree, about 6 feet from the ground. He got the hand-saw, and down came the tree, to get the bees. If my neighbor that saws down apple trees to get his bees, when clustered on them, would read the BEE JOURNAL for one year, I think he would not saw any more trees down to hive his bees. E. DOTY.
Mackesburg, Iowa, Jan. 9, 1883.

Markings of Holy Land Bees.

Please tell me, through the columns of the JOURNAL, if the Syrian or Holy Land bees have any markings different from the Italians.
MISS L. E. DAVISON.
Caribou, Maine.

[That is a difficult question to answer. Mr. Jones says he can tell them by a "shield" on the body above the abdomen; Prof. Cook says the Syrian queens can be easily distinguished by peculiar "bars" across the abdomen. It is easier to distinguish them, however, by the extra amount of brood in the hive, and their sensitive dislike of jars.—ED.]

Italians Outstrip the Black Bees.

I started last spring with 9 colonies, all but one in box hives and log gums. I transferred them in April and May, but the cold and wet weather was very hard on the bees. I increased to 23 by natural and artificial swarming, but doubled back to 16; I have but 2 strong colonies, both Italians; my blacks stand no chance with them. While blacks are starving all around, my Italians are full and strong; I got about 50 lbs. per colony, spring count. After white clover bloomed I had to feed the bees and am still feeding them. I am the only person in this county that has taken over 30 lbs. of honey this season. I am trying to introduce the frame hive, but everybody is predicting failure for me; I hope they will be mistaken. This has been the poorest year for honey I ever knew. Bees, as a general thing, have not gathered enough to winter on. The colonies I transferred were very large and my early swarms worked well. Here, in southwestern Kentucky, we did not see "the silver lining to the clouds," but I am thankful that others did. I did but little myself but I am truly glad that others have reaped a rich harvest. E. C. FRAZIER.
Hanson, Ky.

Weak Colonies, but Wintering well.

The season of 1882 was the hardest year on bees in this section (Eastern Ontario) that I can remember. Bees wintered well, but the spring and summer were very cold and wet; some bees having to be fed in June and July, to keep them from starving. They gained during the latter part of July and August, giving a few swarms and some surplus honey, but did not average more than 10 lbs. per colony, and went into winter quarters weak in bees, but seem to be wintering well so far. J. N. RAYMOND.
Newington, Ont., Jan. 10, 1883.

The Blizzard has Come.

The BEE JOURNAL is indeed a welcome visitor at our house, and, moreover, when other visitors take up the paper to read it, I do not feel ashamed at having such a fine-looking and useful weekly to present them. The Weekly JOURNAL is a perfect fit for me. It was a very favorable autumn for bee-keeping. The autumnal leaves fell from the trees after being tenderly nipped and were strewn with far less violence than is usual in our country. There were no tempests here, but when December came we caught a storm—caught a storm did I say, we called it a blizzard, etc., and we have got it again, and that is not all, we expect to have it for months to come.
JOHN MORRIS.
Mauston, Wis., Jan. 15, 1883.

Bees Quiet in the Cellar.

I cannot brag of my success, this season, with bees and honey. I was away most of the summer, leaving the bees to take care of themselves, but I gave them a good supply of room to store in; being at home a few days in July and again in September, at which times I extracted, getting 110 lbs. of comb and 1,103 lbs. of extracted honey which I sell at home, the comb at 20 and 25c. per lb., and the extracted at 16c. per lb. I had 35 colonies in poor condition in the spring; sold 14, and increased again to 25, all of which are now in the cellar and very quiet; there are no dead bees on the floor yet; I had more than a bushel of them by this time last winter.
D. H. HOPKINS.
Bear Lake, Mich., Jan. 9, 1883.

Footer, not Foster.

I notice in the report of the Md., Va. and W. Va. convention that my name is printed Foster instead of Footer. I should not have called attention to it, but I have received a letter to-day from the post office, addressed to Thos. Foster and intended for me; this makes about 10 letters so received in the last year, and all, I believe, from my name having been printed wrong in several papers. I am greatly in favor of these Bee Conventions and would strongly advise all bee-keepers to attend at least the nearest one, if they possibly can. At the Hagerstown convention it did me good to meet friends with whom I had had correspondence and dealing, but whose faces I had never seen. This association, though yet young and small in numbers, has in its ranks some very intelligent and progressive apiarists, men who have spent many years in the business, as honey producers and queen breeders. I have just read James B. Mason's article on a "Standard Frame." It is my opinion that when we get a universal frame we shall have a universal language and dialect.

THOS. FOOTER.
Cumberland, Md., Jan. 11, 1883.

A Candid Request.

Bee-keepers everywhere should qualify their reports, and not exaggerate, showing such large and enormous yields of honey from spring counts, and let the inquisitive and candid apiarists know from how many colonies they get their large yield. Now, let us figure a little. Scientific calculations are, in a good season of honey flow, that a bee will gather a teaspoonful during the season, and a colony of bees will average from 20,000 to 25,000; half of them in the field would obtain 12,500 teaspoonfuls, and if that will make 1,200 lbs. of honey, they must have large spoons in Texas. It looks to me a little exaggerated. There are some others who claim 800 lbs., 500 lbs. or 400 lbs. per colony. I have the highest respect for intelligent and scientific statements, but have no relish for exaggerated statements.

S. J. McKENNIE.
Burlington, Iowa.

[In *some* of the enormous yields of honey reported, we are assured that the colonies are doubled up to the capacity of 4 or 5 ordinary hives by extra stories, one over another; if so, the statements are unfair, and mislead the unsophisticated. Such reports may be *true* in fact, but totally unfair, and therefore quite unreasonable.—ED.]

Wintering in Sawdust.

I moved into the woods in Marathon county, Wis., Oct. 24, 1880, and had 6 colonies of bees. Before spring I lost all, with dysentery. Last June I bought a colony of Italians that covered only part of three frames. I fed the some old honey, and they gave 2 natural swarms. I bought 2 queens and made 4 colonies by dividing. They all have over 25 lbs. of stores each, except 3, which had 45 lbs. divided between them. I have 5 combs full of odd-sized frame that I can feed them. I only had 3 six-pound boxes of surplus. We had much rainy weather last summer. I winter them in a sawdust house. There are no bees within 4 miles. I have hard and soft maple, basswood, and white clover pasturage. We have got 15 inches of snow and no frost in the ground yet.

EDWIN BUMP.
Marshfield, Wis., Dec. 25, 1882.

Mr. Heddon's Feeder.

In the JOURNAL of Oct. 18, 1882, Mr. Heddon says "It takes only 24 hours time to give them (the bees) 25 lbs. of liquid food through our feeders, and they will put it in a proper position in the hive." Will he be kind enough to give a description of this feeder, through your columns, as I have no doubt it will be of great service to many beside myself. As I find that bees do well in the winter on sugar syrup, which, in this country, is not a quarter the price of honey, I should like to extract all my honey in the autumn and give the bees syrup to refill their combs; but having very little time to devote to my bees, the time that would be required to go round a number of hives to give them enough for winter, by a pound or two at a time, would be more than I could spare. Mr. Heddon's feeder would help me, and doubtless many others, out of a difficulty; and I therefore hope he will give us a full description of his feeder, and thus increase the debt of gratitude we already owe him for his able articles.

J. R. WILLIAMS.
Porthywaen, Oswestry, England.

A Telephone Connected to each Hive.

I vote for the editor to shape the "make-up" of the BEE JOURNAL, to his own notion. The readers can find the editorials, let them be where they may. I see that one of the writers in the BEE JOURNAL of Jan. 17, has been thinking with me in regard to having combs built in frames, then cut and placed in small sections, any size, even to nickel packages, and then placed in a hive to have them fixed up. I have been thinking again. Why not have some kind of a telephone arrangement attached to each hive, so that we can, at any time, hear from our bees. We could soon learn to know by the sound, whether or not all is well; then, at any time in winter, if a colony is not doing well, we can know it and remedy the trouble, if we can. I do not know much about the construction of the telephone, but I do believe one of a cheap kind can be made to do service in the way suggested. My 35 colonies of bees are wintering finely, up to this time. They are on their summer stands, with chaff cushions in the caps.

ISAAC SHARP.
Waveland, Ind., Jan. 19, 1883.

☞ It is not yet a quarter of a century since the first Italian bees landed on our shores, and in this limited time they have been improved both in looks and in honey-gathering capacity. I am bold to assert that there are breeders of this race in America, whose queens will average better in looks, in vigor and in prolificness—workers better for business—than queens that come from Italy to-day.—*Dr. J. P. H. Brown.*

Oldest Bee Paper in America
THE AMERICAN
BEE JOURNAL
Established in 1861

ADVERTISING RATES for 1883.

20 cents per line of space, each insertion,

For either the Weekly or Monthly Editions.

A line of this type will contain *about* 8 words; TWELVE lines will occupy ONE-INCH of space. Transient Advertisements payable in advance. Editorial Notices, 50 cents per line.

SPECIAL RATES.—Advertisements will be inserted in both Weekly and Monthly editions, at the following prices, if wholly paid in advance:

SPACE.	One month	Two mo'ths	Three mo'ths	Six mo'ths	One Year.
1 in. 12 lines	10.00	18.00	25.00	38.00	50.00
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6 in. 72 lines	45.00	70.00	90.00	130.00	175.00

For the Weekly alone, 20 per cent. less than the above rates. On yearly advertisements, payments may be made quarterly, but must be in advance.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement *is* inserted.

THOMAS G. NEWMAN,
925 West Madison Street., Chicago, Ill.

Special Notices.

☞ The American Express Company money order system is the cheapest, safest and most convenient way of remitting small sums of money. Their rates for $1 to $5 are 5 cents; over $5 to $10, 8 cents. They can be purchased at any point where the company have an office, except Canada, and can be made payable at any one of the company's 4,000 offices.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks.

◆

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

◆

☞ The BEE JOURNAL is mailed at the Chicago post office every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1883, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with $6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For four subscribers, with $8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with $10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ The time for the usual winter rush of correspondence is here, and we wish to impress upon all our patrons the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but should be written on separate pieces of paper.

Local Convention Directory.

1883. *Time and Place of Meeting.*

Feb. 3.—Northern Ohio, at Norwalk, O.
8.—Maine State, at Dexter.
Wm. Hoyt, Sec.
14, 15.—N. E. Ohio and N. W. Pa., at Andover
C. T. Leonard, Sec.
March 13.—Lorain Co., at Elyria, Ohio.
O. J. Terrell, Sec., N. Ridgeville, O.
April 5.—Utah, at Salt Lake City.
E. Stevenson, Sec.
17, 18,—Texas State, at McKinney.
Wm. R. Howard, Sec.
28.—Western, at Independence. Mo.
S. W. Salisbury, Sec.
May 11.—Iowa Central, at Winterset.
J. E. Pryor, Sec.
—, —Texas State Convention, at McKinney.
Dr. W. R. Howard, Sec.
Sept. 12-14.—Tri-State, at Toledo, Ohio.
Dr. A. B. Mason, Sec., Wagon Works, O.
Oct. 17, 18.—Northwestern, at Chicago, Ill.
Thomas G. Newman, Sec.
9, 10.—Northern Mich. at Sheridan, Mich.
O. R. Goodno, Sec., Carson City, Mich.
Dec. 5-6, Michigan State, at Flint.
H. D. Cutting. Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

Subscription Credits.—After sending subscriptions to this office, we would respectfully ask every one to look at the label on the wrapper of the next two papers, and there they will find the credit indicated thus: Those who have paid for the first six months of this year will find "June 83" after their names. Those who have paid for the whole year will find "Dec. 83" on their papers. The credit runs to the *end* of the month indicated.

The credit given on THAT LABEL is a sufficient notification of subscriptions due and receipt for payments made. If not so indicated within two weeks after sending money to us, you may be sure something is wrong, and should write to us about it. It will save annoyance and trouble if our subscribers will give this matter due attention.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

☞ Do not let your numbers of the BEE JOURNAL for 1882 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

CLUBBING LIST.

We supply the **American Bee Journal** and any of the following periodicals, one year, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage is prepaid by the publishers.

	Publishers' Price.	*Club*
The Weekly Bee Journal, ...	$2 00..	
and Gleanings in Bee-Culture (A.I.Root)	3 00..	2 75
Bee-Keepers' Magazine (A.J.King).	3 25..	3 00
Bee-Keepers' Exch'nge (Houk & Peet)	3 00..	2 75
Bee-Keepers' Guide (A.G.Hill)......	2 50..	2 35
Kansas Bee-Keeper........	2 60..	2 40
The 6 above-named papers.......	6 35..	5 50
The Weekly Bee Journal one year and		
Prof. Cook's Manual (bound in cloth)	3 25..	2 75
Bees and Honey, (T. G. Newman) "	2 75..	2 50
Binder for Weekly Bee Journal.....	2 75..	2 50
Apiary Register for 100 colonies	3 50..	3 00
Apiary Register for 200 colonies	4 00..	3 50

The **Monthly Bee Journal** and any of the above, $1 less than the figures in the last column.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

☞ May we ask you, dear reader, to speak a good word for the BEE JOURNAL to neighbors who keep bees, and send on *at least one new* subscription with your own? Our premium, "Bees and Honey," in cloth, for one *new* subscriber to the Weekly, or two for the Monthly, besides your own subscription to either edition, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

☞ Postage stamps, of one, two or three cent denomination, accepted for fractional parts of a dollar; but money is preferred.

☞ Renewals may be made at any time; but all papers are stopped at the expiration of the time paid for, unless requested to be continued.

☞ One of the largest seed establishments in the United States is located at Marblehead, Mass., and is owned and managed by James J. H. Gregory. Mr. Gregory has earned a reputation second to none throughout every State in the Union, of selling the most reliable seeds that can possibly be obtained.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., January 22, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The supply of extracted honey is fully up to the demand. My quotations are: 7c. for dark and 9c. for light, delivered here.

BEESWAX—It is quite scarce. I am paying 27c. for good yellow wax, on arrival; dark and off colora, 17@22c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The demand is good for extracted in barrels as well as in glass jars and tin buckets; arrivals are fair. The demand is fair for comb honey, which, however, is not cheap enough to make trade lively. Extracted brings 7@10c. on arrival; comb honey, 14@20c.

BEESWAX—Is scarce and brings 20@27c. on arrival. CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—January month, and still there is a large surplus of comb honey on the market. Prices are weak owing to large offerings, and anxiety on the part of shippers and holders here to realize on the product. Extracted honey is steady, but the demand is light.

We quote: white comb honey, in 1@2 lb. sections, 17@18c. Dark comb honey, hardly any demand. It is held at 12½@15c. Extracted—White brings from 9@10c.; dark, 8@9c.; kegs, half-barrels and casks bring about same price.

BEESWAX—Yellow, 30@32c.; dark, 27@28c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—Nothing of consequence is at present doing. There is no special inquiry, and no selling pressure, unless it is on off qualities.

White comb, 17@20c; dark to good, 11@13½c; extracted, choice to extra white, 8½@9½c.; dark and candied, 7@8c.

BEESWAX—We quote 25@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Strained, at 6@7½c., was salable—one lot of 17 bbls. bringing inside figure; but comb, very dull at 16c. to 18c.; and extracted do., 8@9c.

BEESWAX—Prime bright steady at 27@28c.

W. T. ANDERSON & CO., 117 N. Main Street.

CLEVELAND.

HONEY—Has changed in price a very little, we find it necessary to sell all grades about 1 cent per ℔. less. Best white, in 1 ℔ sections, 20@21c. per per pound; in 2 lb. sections, 18@20c. Extracted is very dull indeed, hardly any sale.

BEESWAX—Scarce, 28@30c.

A. C. KENDEL, 115 Ontario Street.

NEW YORK.

HONEY—Strictly choice to fancy white clover honey, continues in light supply and prices held firmly. Buckwheat and extracted honey quiet and unchanged.

We quote: White clover, first quality, 1 ℔ boxes, 24@25c; fair to good, 22@23c.; buckwheat, 15@17c. Extracted, clover, 10@13c.; buckwheat, 9@10c.

BEESWAX—There is only a moderate demand for wax, but the supply is not large and prices firmly held for prime lots.

Western pure, 30@32c; southern, pure, 31@33c.

D. W. QUINBY, 105 Park Place.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—30c.

CROCKER & BLAKE, 57 Chatham Street.

Send a postal for circular. It tells you about the handiest clamp and most perfect sections and cold-blast Smoker. F. Boomhower, Gallupville, NY

Bees for Sale.

50 Colonies of Bees, in Gallup frames, cheap.

200 Colonies of Bees, in Langstroth frames in prime condition.

J. H. ROBERTSON,
36wtf Pewamo, Ionia Co., Mich.

STUDENTS
IN BEE-CULTURE.

Having had such good success for two years past in teaching the theory and practice of honey-producing, I have now made arrangements to accommodate a large class during the coming season. I shall aim to give a five months' instruction, at the end of which time I hope and expect to turn out bee-keepers competent to profitably engage in the pursuit, or such as will be sought for as assistants, at wages above common laborers. All interested, **write for terms.**

BEE-KEEPERS' SUPPLIES

on hand, as usual. Beeswax wanted.

JAMES HEDDON.
Dowagiac, Mich. 1*tf

LIVE BEE-KEEPERS WANTED,

to introduce the new lime cushion, the only protection yet discovered that will carry the bees safely through winter and spring without fail. Send $50, for right to retail this cushion in your county, or send $5 for one apiary right to patentee. Remit by registered letter or P. O. order.

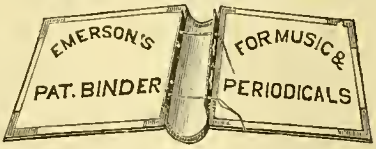
F. DELLA TORRE.
74 Charles-st. Avenue, Baltimore, Md.
Patented April 25, 1882. No. 254,932. 45w13t

THE CONQUEROR.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent postpaid for $2. Address,

BINGHAM & HETHERINGTON,
Abronia, Mich.

BIND YOUR JOURNALS
AND KEEP THEM
NEAT AND CLEAN.



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IS THE NEATEST AND CHEAPEST.

Any one can use them. Directions in each Binder.

For Monthly Bee Journal................**50c.**
For Weekly Bee Journal................**75c.**

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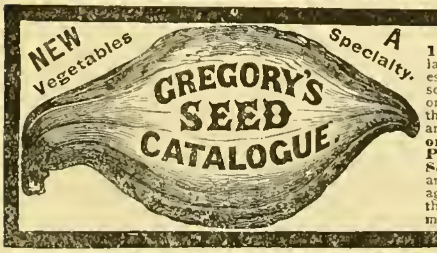

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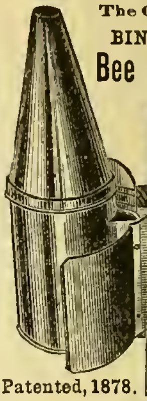

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ESTABLISHED IN 1861

VOL. XIX. CHICAGO, ILL., JANUARY 31, 1883. No. 5.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

Bees as Fertilizers of Flowers.

In fructifying the various flowers bees act as Nature's marriage-priests, and present us with a field of study as boundless as the gorgeous realm of Nature's bloom. But for the oft-repeated visits of the bees, many a a beautiful flower would, in a short time, cease to bloom—aye, and also to live! Many plants absolutely require the visits of bees or other insects to remove their pollen-masses, and thus to fertilize them.

Hence, Darwin wisely remarks, when speaking of clover and heart's-ease: "No bees, no seed; no seed, no increase of the flower. The more visits from the bees, the more seeds from the flower; the more seeds from the flower, the more flowers from the seeds."

Darwin mentions the following experiment: "Twenty heads of white clover, visited by bees, produced 2,990 seeds; while twenty heads, so protected that bees could not visit them, produced *not one seed*."

Prof. Beal, of the Michigan Agricultural College, has been conducting experiments, for the past six years, with bumble-bees and red clover. The sixth experiment, during 1882, he describes as follows:

> Two fine bunches of the first clover crop, apparently alike, were both covered with mosquito netting. No insects were seen about either, except what are mentioned below. On June 29th, a bumble-bee was placed inside of one netting and seen to work on the flowers; July 10th, two more were introduced and seen to work, and on the 12th, more were put in and observed. On July 31st, fifty ripe heads were selected from each plant and the seeds carefully counted. The fifty heads on the plants where bees were excluded yielded twenty-five seeds. The fifty heads on the plant where the bumble-bees were inserted under the muslin, and seen to work, yielded ninety-two seeds. This is nearly four times as many as were produced by heads where the bees were excluded.
>
> In all instances, the heads were seen to be unopened, when they were covered with muslin or paper sacks. In the last experiment, as well as in the others, perhaps the bees did not visit all the flowers. Insects, even in the most favorable seasons, are not always to be relied on to transfer pollen enough to fertilize all the pistils. Prof. W. W. Tracy has found in several seasons, where he has raised Hubbard squashes on a large scale, that he increased his crop of fruit quite largely by artificially transferring pollen with his own hand, every day or two, during flowering.
>
> To see how the uncovered heads of red clover from different plants varied in the number of seeds produced, I selected fifty heads from five plants near each other, where each had plenty of room. This was the second crop of clover. Fifty heads from each plant yielded as follows: 1.260, 1.275. 1,460, 1,485. 1.820 seeds respectively. In another place, fifty heads yielded 2.290 seeds, or nearly twice as many as plant number one in the lots just above noticed. It is a fair conclusion that bumble-bees are of considerable value in fertilizing the flowers of red clover.

Statistical Reports.

Dr. Miller writes us that he is daily receiving "a steady stream of postal cards" covering the whole ground, "from Canada to Texas." As each one helps to swell the aggregate, we hope they will continue, until all are sent in. The Doctor adds:

> A correspondent asks what should be the report of wax, from one who uses his wax in making foundation. I suppose each one should report all his wax, whether he uses or sells it. Several say they will send in reports of others. if desired. By all means, let us have all we can.

Certainly; all honey and beeswax should be reported, no matter whether used by the bee-keepers themselves, or sold and used by others.

Dr. Miller assures us that "from present appearances we shall get fuller statistics than ever before." This is very encouraging; but, probably, some are neglecting the matter, thinking it will make but little difference about one report; others may think, because they have given a report in some bee paper, or at a convention, that such is sufficient. A moment's thought, however, will dispel these delusions. The many, even if comparatively small, will swell the grand total. Some have asked "if we send in the reports of our neighbors, may they not be duplicated?" No; the reports are all classified by States and each person's name is recorded, so that duplicates are impossible. If you have neighbors, that you have good reason to think have neglected it, send in the reports for them, and, in this way, aid the work all in your power. As this is our LAST CALL, please attend to it *at once*.

Do *not* send to us, but address them to "Dr. C. C. Miller, Marengo, Ill."

* * *

☞ Our readers will notice that the BEE JOURNAL is this week "made up" with a cover, which may be removed or retained in binding the year's numbers, to suit the wishes of the owner of the volume. We have found that a great majority prefer this plan, and so have adopted it permanently.

* * *

☞ The Rev. Thomas Pope Hodnett, pastor of St. Malachy's Church, Chicago, has placed a neat pamphlet of 64 octavo pages on our desk. It contains a variety of "matter for family reading and instruction,"—several sermons, poetry, facts, figures, letters, etc., by "Father Hodnett," who is an enthusiastic and zealous Catholic priest, by whose exertions a very handsome church has just been erected on the corner of Walnut Street and Western Avenue, only a few blocks from our office. We have read several portions of the pamphlets with more than ordinary interest, and have laid it away for a more thorough perusal in the future.

The Paraffine and Glucose Story.

We have received the following letter from Mr. J. W. Porter, Charlottesville, Va., dated Jan. 18, 1883 :

Dear Editor :—In yesterday's Cincinnati *Commercial Gazette*, weekly, appears a remarkable editorial article on "Food Adulteration." I have, by this mail, written them a letter, which, if published, will tend to correct the impressions such an article would produce, when the public mind is so sensitive on the subject of adulteration.

I take the ground that comb honey is almost the only unadulterated sweet on the market, and such, because the cupidity of man has devised no way to profitably substitute a counterfeited article. Let us, one and all, labor for legislative protection against food adulteration, until we get as full protection as the law gives the Englishman.

The following are the paragraphs referred to by Mr. Porter, contained in the editorial article of the Cincinnati paper :

"It used to be considered safe to use honey in the comb, but now nearly all this is manufactured."

"At first pure honey was extracted from the comb, and the bees were fed on glucose, from which the comb was rapidly refilled, but now, artificial combs are produced, and bees being fed on glucose, so-called honey is turned out in comparatively large quantities, and bees, at the same time, are being demoralized."

The editor of the *Commercial Gazette* has been imposed upon by that man "Wiley," who invented the "paraffine comb and glucose" story as "a joke," as he stated in the Indiana *Farmer* last June, which was copied into the Bee Journal of June 14, 1882, and commented upon.

Mr. Wiley's own version of the origin of the story [lie], and our remarks, are as follows :

Perhaps it may be well enough to give here the origin of the "paraffine comb" story which has appeared, I believe, in almost every publication in the country. The original appeared in the *Popular Science Monthly* for June, 1881, in an article entitled "Glucose and Grape Sugar," which I contributed to that number, and on page 254, occur the following words : "Bees eat glucose with the greatest avidity ; or rather, they act as funnels by which the glucose is poured into the comb. For it is quite true that the honey made by bees which have free access to glucose differs scarcely at all from the glucose itself. But the quantity of honey which a bee will store away when fed on glucose is truly wonderful. This gluttony, however, rapidly undermines the apiarian constitution, and the bee rarely lives to enjoy the fruits of its apparent good fortune. In commercial honey, which is entirely free from bee mediation, the comb is made of paraffine, and filled with pure glucose by appropriate machinery.

This last clause which, when written, was meant for a *scientific pleasantry*, came near throwing the whole bee world into epilepsy. It appears that persons who devote themselves to Bee Journals undergo a certain cerebral inspiration which renders them incapable of seeing a *joke*. The only point which they can appreciate seems to be the sting of a bee.

The rejoinder reminds us of an anecdote we heard many years ago, located in a rural district in Indiana. A well-to-do-farmer lost a very fine filly from his pasture-lot, and after several days' search found it snugly tied in the log barn of a distant neighbor of doubtful repute. The neighbor was indicted, tried, and found guilty of larceny; when the Judge asked what he had to say, why sentence should not be passed, he put in a plea that the animal was only taken for a joke. The Judge inquired how far his barn was from the pasture lot, to which he replied, "about 5 miles." "Well," said the Judge, "that is carrying a joke too far ; hard labor in the penitentiary for seven years." The writer above says he contributed to the *Popular Science Monthly* his "paraffine comb" story [lie] about a year ago, "which has appeared in almost every publication in the country." The latter part of the article, however, was only meant for a *scientific pleasantry*.

Do scientific men indulge in pleasantries which will cast a gloom over thousands of honest producers throughout the country, and depreciate the value of their product by creating a prejudice against it ? For nearly a year this *scientific joker* saw his fabrication published in nearly all the papers in the conntry, and reiterated from across the ocean, and yet he lacked the manhood to affirm it a joke until the "Bee Journal man" counteracted its influence by showing the falsity and absurdity of the article. Whether it be true, as has been often intimated, that the story was instigated by parties interested in the glucose traffic, in retaliation for the hostility of the bee men to their frauds, we cannot affirm ; but we do believe it originated with no honest intention.

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☞ We have a few copies of our pamphlet entitled "*Bee Culture*" left, and have reduced the price from 40 to 25 cents each, or $2 per dozen.

Iowa State Convention.

Mr. M. Sorrick, Des Moines, Iowa, has written us as follows concerning the practicability of holding a State Convention, and getting up a good Bee and Honey Show at the next Iowa State Fair in that city. He says :

Mr. Editor :—Ought there not to be a State Convention in Iowa ? It seems as if we were getting behind in the matter of not having a State Convention. As the State Fair is located at Des Moines, for 1883, I should like to see a State Bee-Keepers' Convention some time during the Fair week, if not sooner ; as this is a central point. At that time there will be a good many bee-keepers here from all parts of the State, as well as other States. Would not that be a good time to get the bee-keepers together ? I really think there ought to be an organization sooner. I should like to hear what the other bee-keepers of Iowa think of the matter.

We have had steady cold weather since December 25, with good sleighing ; the snow is two feet deep, on the level. Half of my bees are under a snow drift, where I shall leave them, without disturbing them until the weather moderates. Then I will dig them out and clear out the entrances.

M. Sorrick.

Des Moines, Iowa, Jan. 18, 1883.

As Iowa is a grand field for bee-keeping, and as it contains a large number of wide-awake, progressive apiarists, we see no reason why it should not have a State organization, and a very large and creditable display of honey and bees at the forthcoming State Fair.

The very interesting lecture lately delivered by the Rev. O. Clute before the State Agricultural Society, should have made that body favorable to the bee and honey interests, and we hope to see very liberal premiums offered by the Board. Mr. Clute is one of the best of public speakers—interesting and eloquent—and he is, withal, a *thoroughly practical and progressive* bee-keeper. If he can be enlisted to labor with the Board, we have no doubt but that he can secure premiums, as liberal as have Mr. Cutting and Prof. Cook, of the Board of the Michigan State Agricultural Society. We think all it needs is a little united action among apiarists, and they can secure all the premiums that they can consistently ask for. "*Ask and ye shall receive*" is a promise, trite but true. Try it.

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☞ Renewals may be made at any time ; but all papers are stopped at the expiration of the time paid for, unless requested to be continued.

Bee Culture in the Rockies.

There are many inquiries now about bee-culture in Colorado. In order to reply to the many, all at once, we give the following from the *American Agriculturist* for January:

Apiculture is an established industry in Colorado. A recent tour through all the valley lands, in search of agricultural statistics, gave the writer full evidence that both in Northern and Southern Colorado more or less attention is being paid to that pleasant and profitable industry; and that, if it increased in the same ratio for the next ten years, at that time the market could be supplied with the home product to the entire exclusion of that now brought from Kansas and California. We are inclined to believe that at least five thousand colonies of bees, mainly Italian, are in the State; that Colorado is as well adapted to profitable bee-keeping as California; that the honey produced is full as white, as pure, and as sweet as any introduced into the market; that there is hardly a farm or garden where bees will not thrive, and that the foot-hills are peculiarly adapted for extensive apiaries.

In the East, warm weather, with occasional storms, is necessary to a good honey season. A continual drouth is fatal to the bees' harvest. Looking at Colorado from this point of view, it would seem as if its arid climate would be unfavorable. But the belief now prevails, that the hot days, followed so invariably by cool nights, facilitate the secretion of honey in flowers and blossoms better than any other state of weather. In the East, days of drouth are usually followed by warm nights, which is fatal to honey prospects. Occasional showers cool the atmosphere, which is favorable; therefore, the temperature is of more importance than dampness. Again, continual rains destroy the honey crop, and deprive the bees of an opportunity to go upon the wing. Taking these things into consideration, we see why bees do so well in the dry climate of Colorado. Its hot days, following by cool nights, give to nature an abundance of sweets. With no prolonged rains, bees have an ample opportunity to improve the shining hour, which in Colorado means from sunrise to sunset, one day after another, week in and week out—as a rule.

Where a canyon or gulch is open or wide, and the hills are low, a dry side gulch with a southeastern exposure would be a good situation. In the early spring the bees go to the lowest foot-hills to get the earliest-blooming flowers, and as the same varieties blossom at higher altitudes, they follow them up, and as the season advances, still keep following them up higher and higher. Then, as new varieties bloom below, they repeat the process during the entire season of bloom. But it is also to be said that bees will do well upon the plains, in the valleys, and wherever land is under cultivation; for the face of nature here is covered from early spring-time to late fall, with flowers that afford honey in great abundance. Trees, wild blooms, vegetable blossoms, wild grasses, cleome, alfalfa, corn blossoms, all offer their store of sweet treasure to the ever busy bees. In considering this source of constant supply, it is a fact of great importance to know, that from the early part of March, generally, bees begin to gather pollen and honey from willows on southern hillsides and sunny slopes, and from this time to October, there are very few days that honey is not gathered from some source.

Now contrast this with a season in the Eastern, Middle, or even Western States, where the honey season seldom lasts three months, and it will be seen that Colorado is one of the best States in the Union for bee-culture. Pasturage is profuse in its abundance. With the willow blossoms comes a species of *Delphinium*, pushing its head up through the snow, and covering foot-hills and plains with its bloom.

Roses and red raspberries abound in the foot-hills. On the plains, with the willow and cottonwood, comes a little weed called the "hog potato," growing flat on the ground. It has a purple bloom. Then there are fruit blossoms and wild roses in May and June; milkweed and immeasurable wild flowers also appear. Alfalfa is in its first bloom and is favorite foraging ground for the busy bees. In July the wild grasses and wild flowers tempt the roving fancy of the bees, while melon, squash, and other vines invite the winged seekers after sweets. During August and September, corn tassels, alfalfa, amber cane, furnish abundant food. At this time, too, the prairie, in spots, are covered with cleome, or the Rocky Mountain bee-plant, with its wealth of purple flowers, in which lies hidden an amount of bee-food one little dreams of, which the bees transform into the choicest honey that can be found. In October, there grows on dry prairie land, a weed, the shape and size of sage brush, having a yellow bloom. This is not the best bee-food known, but it is used when other things are not to be had.

There is one drawback to bee-culture which must be mentioned. It comes from too much warm, sunny weather in winter. This causes bees left on summer stands to fly out, and doing this day after day, many are lost and never return to the hive, and as they do not begin breeding until February, and then very slowly, the numbers rapidly decrease, and often the entire swarm is lost from this cause. The remedy for this is a good cellar, well ventilated, and so arranged that the temperature will be kept at 40° to 50° Farenheit. It is to be said, in addition, that perfect darkness and the greatest degree of quiet that can be secured must be maintained.

Special Notice.—We will, hereafter, supply the Weekly BEE JOURNAL for 1883 and Cook's Manual in cloth for $2.75, or the Monthly and Manual in cloth for $1.75.

Attractive Packages of Honey.

The following, from the *American Agriculturist*, is such advice as we have often given to bee-keepers, about having honey attractive, when marketing it for the retail trade. It cannot be too often stated, nor too persistently urged. If we want to popularize its consumption, it must attract the eye, and, by its neatness, captivate the purchaser. This "advice is good and timely," and bee-keepers should "ever remember" it:

Winter is a good time to build up a market. For extracted honey, use attractive pails and jars, with neat labels, which state the kind of honey, and the name of the person that produces it. Neat pyramids of these packages, in the stores, will attract buyers. The size of the vessels should vary from one-half a pound to those that will hold five pounds. The label should state that the granulation is no injury, and, indeed, is the best assurance of purity. It should also tell how to restore the liquid condition, without harm to the honey, by applying heat, not to exceed 180° F.

Comb honey should be put in a neat case, so as to show off to the best advantage. The case ought to bear the name of the producer, and the kind and grade of the honey. Bee-keepers cannot be too careful about grading their honey. In creating a market, nothing will take the place of neatness and care in putting up the honey. If it properly arranged, every dealer will be only too glad to give it a showy place in his store.

☞ We wish to thank the many who have not only renewed their subscription to the BEE JOURNAL for 1883, but who have also sent on one or more new names with their own. The multitude of expressions of fraternal good-will and kind wishes for the success of the JOURNAL also call for our acknowledgment. We cannot find time to write to each one personally, and hope that all such will take this acknowledgment as though personally addressed to those who have so kindly aided us in our work.

☞ Mrs. Martha Adams Winder, wife of Mr. John W. Winder, recently from Thibadoux, La., died at Uvalde, Texas, of dropsy of the heart, on Sunday the 7th inst., in her 52nd year. Mrs. Winder is reported to us as a sincere and consistent Christian, and that, during her illness, she often expressed a wish to recover, so that she might be more useful in the church. Our sympathies are with the husband and the two sons, for truly the very heart of the home life departs when the mother is taken away.

Dampness and Bees in Winter.

Prof. Cook, in an exchange, refutes the idea that dampness is a cause of mortality of bees in winter. He says:

> A writer on bee culture calls attention to the fact that honey, the winter food of the bees, is almost purely a hydro-carbon, and so needs little digestion, before it is absorbed into the nutritive fluid from the stomach. Then it is assimilated, and passes off as water and carbonic acid. Thus the excretion, in winter, is by respiration. That this may go on freely, the air must be dry. The writer then asserts, that in those winters most remarkable for the bee mortality, the air has been very moist.
>
> An examination of the condition of the atmosphere as to the point of saturation, from accurate records taken three times daily, for the past twenty years, shows that there is not the least evidence in favor of the idea that excessive moisture was in any single case the cause of the great losses of bees. It also appears that in all the seasons of bad wintering, severe cold was experienced. It is further shown that when the cold occurred early in the winter, the mortality commenced at an early period. If late, the bees did not appear diseased until near the end of winter.

☞ "Spence's Select Social Readings" is the title of a pamphlet of 126 pages, by Jacob Spence, Toronto, Ontario, Canada. This is an excellent manual of Readings, Recitations, and interesting Selections, admirably suitable for those who are desirous of giving readings, recitations, etc., at sociables, or gatherings for spending a pleasant evening. It covers the ground from "grave" to "gay," with rich and rare selections. Mr. Spence is one of Canada's progressive apiarists and a constant reader of the Bee Journal.

☞ May we ask you, dear reader, to speak a good word for the Bee Journal to neighbors who keep bees, and send on *at least one new* subscription with your own? Our premium, "Bees and Honey," in cloth, for one *new* subscriber to the Weekly, or two for the Monthly, besides your own subscription to either edition, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the Bee Journal to a new subscriber, and progressive apiculture to another devotee.

☞ Do not let your numbers of the Bee Journal for 1882 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

New Catalogues and Samples.

We have received Catalogues for 1883 from T. L. VonDorn, Omaha, Neb., and I. R. Good, Nappanee, Ind.

The following have sent us new Seed Catalogues: Jas. J. H. Gregory, Marblehead, Mass.; and J. W. Manning, Reading, Mass.

The Philadelphia, Pa., Record Almanac for 1883 is received, and is full of statistical and useful information.

J. V. Caldwell, Cambridge, Ill., and D. S. Given & Co., Hoopeston, Ill., have sent us very nice samples of comb foundation.

☞ "There's no Time like the Old Time," is the title of a new song by Oliver Wendell Holmes, music by J. J. Roe, and published by W. W. Whitney, 111 Summit St., Toledo, O., a copy of which we have received, marked "With the compliments of the author."

☞ Attention is called to our *new* and liberal advertising rates for 1883.

Convention Notices.

☞ The Texas State Bee-Keepers' Association will hold its Fifth Annual Convention at McKinney, Collin Co., on Tuesday and Wednesday, April 17th and 18th, 1883; at the residence of Hon. W. H. Andrews.

Wm. R. Howard, *Sec.*
Kingston, Texas.

☞ The bee-keepers of Northeastern Michigan are hereby requested to meet at the Dayton Hotel, in Flint, at 10 a. m. on Tuesday, Feb. 13, 1883, for the purpose of organizing a bee-keepers' association. All bee-keepers are earnestly requested to come, and to bring with them any apiarian articles of interest that they may possess. A free room, and reduced rates of board have been secured.

W. Z. Hutchinson.
Rogersville, Mich., Jan. 22, 1883.

☞ The Tuscarawas Valley Bee-Keepers' Association will hold a meeting in the Town Hall in Coshocton, O., on Feb. 14, 1883, at 10 a. m. Every bee-keeper is wanted at this meeting. Every one interested in bees or honey is requested to be present.

J. A. Bucklew, *Sec.*, Clarks, O.

☞ The next meeting of the Haldimand, Ont., Bee-Keepers' Association will be held at Nelle's Corners on Saturday, March 31, 1883, at 11 a. m.

H. Campbell.

☞ The second annual meeting of the Colorado State Bee-Keepers' Association will be held in Denver, on February 6, and continue two days.

D. S. Grimes, *Pres.*

☞ The next meeting of the Maine Bee-Keepers' Association will be held at Dexter, February 8th and 9th, 1883. A large attendance of bee-keepers from different parts of the State is expected, and it is hoped that it may be one of the most interesting meetings ever held by the Association. A large exhibit of hives and implements, used in the apiary, is expected; and all attending the meeting are earnestly requested to bring something to help make a good display. Any article sent to the Secretary will be placed on exhibition, and cared for, free of charge. The following is an imperfect outline of the programme for the two days: First day:—Secretary's report; Treasurer's report; reports of Vice Presidents of the different counties represented; President's address; choosing committee to award preferences on articles exhibited; reading of essays and discussions. Second day:—Election of officers; report of committee on articles exhibited; reading of essays and discussions. Essays are expected on the following subjects—Feeding Bees; How to make Bee-keeping Profitable; Artificial Pasturage; The Coming Bee, etc., etc.

Ripley, Me. Wm. Hoyt, *Sec.*

☞ The annual meeting of the Northern Ohio Bee-Keepers' Association will be held in Whittlesey Hall, Norwalk, O., Saturday, February 3, 1883. All bee-keepers are invited to attend and participate in the exercises. Subjects for discussion: Size of Frame; Size of Section; Best Method of Obtaining Surplus Honey, and various other matters of interest to all bee-keepers. S. F. Newman, *Sec.*

☞ The Western Bee-Keepers' Association meets at Independence, Mo., April 28, 1883.

S. W. Salisbury, *Sec.*

☞ The Northeastern Ohio and Northwestern Pennsylvania Bee-Keepers' Association will meet at Andover, Ohio, to hold their annual convention, on the second Wednesday and Thursday of February, 1883.

C. T. Leonard, *Sec.*

A $20.00 Biblical Reward.—The publishers of *Rutledge's Monthly* offer twelve valuable rewards in their *Monthly* for February, among which is the following:

> We will give $20.00 in gold to the person telling us which is the middle verse in the Old Testament Scriptures by February 10th, 1883. Should two or more correct answers be received, the reward will be divided. The money will be forwarded to the winner February 15th, 1883. Persons trying for the reward must send 20 cents in silver (no postage stamps taken) with their answer, for which they will receive the March *Monthly*, in which the name and address of the winner of the reward and the correct answer will be published. This may be worth $20.00 to you. Address Rutledge Publishing Company, Easton, Pa.

CORRESPONDENCE

Beautiful Flowers.

S. W. DUFFIELD.

Ye are the eyes of the world,
With which the spirit divine
Looks, from a thousand nooks,
Full into mine!

Ye are the breath of the world,
With which the spirit divine
Breathes, through these fragrant wreaths,
A perfume fine.

Come from the ends of the world,
Ye flowers in waves of light!
Break on the souls that ache
Through all the night.

For the American Bee Journal.

The Carbonic Acid Gas Question.

S. CORNEIL.

The direction taken by the carbonic acid produced by the respiration of a cluster of bees is often a leading subject for discussion at bee-keepers' conventions. A large majority of those taking part in such discussions seem to be of the opinion that because the specific gravity of this gas is about one-and-a-half times that of atmospheric air, it falls to the bottom and accumulates or runs out at the lowest aperture, like so much mercury or water, some going so far as to assume that they can run it off from the cellar through the drain or ventilating pipe, while at the same time a current of pure air flows in the opposite direction. We are further told that it is necessary to raise our hives at least 10 inches to keep the bees out of the stratum of this gas, which will accumulate at the floor before spring. On the other hand a few bee-keepers, amongst whom I recollect the names of Dr. Southwick and P. H. Elwood, hold that this gas does not fall to the bottom, but that it is uniformly diffused through the air of the hive or repository. "The detection of this gas, and an exact determination of the amount of it contained in air, require skill, careful attention, and instruments and materials of analysis of much perfection." Fortunately, it is not necessary for bee-keepers to make original inquiries to decide whether it accumulates at the floor or becomes diffused through the apartment, because very careful experiments have already been made by some of the most prominent scientists of the present age, and the results of their investigations are such as to leave no difficulty in finding out the direction taken by the carbonic acid evolved by respiration.

The quantity of carbonic acid in air, "as pure as it blows on the hill tops," is on an average about 4 volumes in 10,000. The standard for good ventilation, fixed by the late Dr. Parkes, is that the ratio of carbonic acid shall not exceed 6 volumes in 10,000. The air exhaled contains one hundred times the natural quantity. In the following table, it will be noticed that the proportion of carbonic acid is in most cases excessive. The variations at floor and ceiling are likely caused by currents of cooler air from outside.

TABLE OF ANALYSES FOR THE DETERMINATION OF CARBONIC ACID.

Locality. Observer's name follows each locality.	Space enclosed.	Persons present.	Carbonic Acid in 10,000 volumes.	Where Air Was Taken From.
Opera Comique, parterre........	......	1000	15.04	1 metre ab'v floor
ceiling....	......	1000	28.12	At ceiling.
LeBlanc				
Very full room, 14 feet high....	......	....	22 4	At floor.
Do do	......	....	26.6	At ceiling.
Petteokoffer	cubic met's			
Lecture room after a lecture...	280	52	62.	At the ceiling.
Do do do...	280	52	55.	At the floor.
Lassaigne				
Lecture room after a lecture...	280	52	49.	At ceiling.
Do do do...	280	52	43.	At floor.
Lassaigne				
Theater at Ghent	......	....	46.3	From parterre.
Do do	......	....	53.6	From gallery.
Lappeus	feet.			
Small dwelling...	940	9	12.13	6 in. below ceili'g
Do do ...	940	9	12.76	2½ ft. above floor
Roscoe				
School room.....	4640	70	33.05	6 in. below ceili'g
Do do	4640	70	32.53	3 ft. above floor
Roscoe				
School room.....	4640	70	23.90	6 in. below ceili'g
Do do	4640	70	24.59	2½ ft. above floor
Roscoe				
School room.....	22140	160	26.96	6 in. below ceili'g
Do do	22140	160	29.49	3 ft. above floor
Roscoe				
Wellington Barracks	7920	20	13.82	3 in. below ceili'g
Do do	7920	20	16.84	3 ft. above floor,
Rescoe				
Theater	......	....	26.37	4 ft. ab. parterre
Do	......	....	32 12	34 ft. ab. "
Roscoe				
House of Reps., Washington ...	......	....	5 5	Floor, fair aud'ce
Do do ...	......	....	4.5	Galleries, "
DeWetherill				
Senate..........	......	....	5.7	Floor, fair aud'ce
Do	......	....	4.	Galleries, "
DeWetberill				
Senate..........	......	....	4.6	Floor.
Do	......	....	4.8	Galleries crowded.
DeWetherill				

The following quotations are also to the point:

"Carbonic acid is so heavy that when quite pure, it can be poured like water from vessel to vessel, and yet, if a vessel of it is left open to the air, it will soon pass off and disappear. This is very important to us, otherwise the amount of this heavy gas produced would make the continuance of life impossible."—*Hartshorne, in "Our Homes."*

Dr. Mattson, author of "Facts for the People Concerning Health," says: "This carbonic acid being heavier than common air, it is often supposed that it is precipitated to the floor as fast as it escapes from the lungs during the process of respiration. It would be unfortunate if this were true. Nature has provided against this difficulty through the well-known law which regulates the diffusion of gases."

"It is conceived by some that the carbonic acid of the breath, from its greater weight, must be chiefly at the bottom of the room, but this is a mistake. The heated breath ascends instantly, because it is, as a whole, lighter than the air around it, and the carbonic acid in it does not tend to separate from it and fall down by its own superior weight, but by the law of the diffusion of gases seeks to spread itself equally all over the room, and would do so though it were lying at first on the floor."—*Chambers' Encyclopædia.*

Dr. Wetherill, speaking of Loppens' experiments upon the air of unventilated rooms, says:

"These experiments, like those of Lassaigne and others, establish the fact that the carbonic acid of an unventilated room, is uniformly diffused therein, the slight difference being in favor of the ceiling, and not of the floor, as was formerly ignorantly assumed from the superior specific weight of this gas."

The following very important statement is taken from the final report of a board of United States officers, convened by request of a special committee, on the ventilation of the Capitol at Washington. Great weight attaches to it, because they had placed before them all that could be said in favor of the downward theory, and had fully considered the question in all its bearings.

"This carbonic acid gas, like all other gaseous impurities derived from respiration, is present in about the same proportion at all heights in the room, the percentage being nearly the same in samples of air taken from the top and from the bottom in ordinary apartments. In the hall the carbonic acid is slightly in excess at the top. It is a gross error to suppose that this gas falls to the floor of the house, for, although when pure, it is heavier than atmospheric air of the same temperature; yet air expired from the lungs, is higher than the surrounding air at ordinary temperatures, and the law of the diffusion of gases effectually prevents any separation."

The report is signed as follows: Joseph Henry, Secretary of the Smithsonian Institution, President of the Board; Thos. Lincoln Casey, Lieut. Col. Corps of Engineers, Member of the Board; Edward Clark, Member of the Board; F. Schumann, Civil Engineer, Member of the Board; and J. S. Billings, Surgeon U. S. Army, Secretary of the Board.

I trust the foregoing will be of some assistance to our friends in deciding for themselves what becomes of the carbonic acid. I propose having something further to say on the other principal product of respiration, aqueous vapor, at a future time.

Lindsay, Jan. 25, 1883.

For the American Bee Journal.

Catnip as a Honey Plant.

T. ELLICOTT.

I believe little is known as to the amount of honey bees get from it, and it is not strange that it is so, when one thinks of the quantity growing, and the number of bees to work on it. I think it is never neglected (while in blossom) by the bees; at least, I never have seen it when bees did not visit it from morning until night. The amount growing is far less than one would suppose. Let any one take up all the plants growing in an old village, and I think he will find there is far less than he supposed.

I tried getting plants in that way to set in a piece of ground which I had prepared to receive them, and was much disappointed in the number I found, but was not at all disappointed during the past season, with those I set out, when I found them thronged with bees from morning until night, all the time they were in blossom; and then in the fall they blossomed a second time, and were worked on by bees until the frost killed them. Let any one devote a small piece of ground to catnip, and watch the bees work on it, and I believe any one who does so, will be satisfied that there is not a plant that grows that has more attraction for bees, and one must suppose that bees do not work on it for nothing, when, if they watch other plants, they see them deserted as soon as the honey flow ceases.

Much is said about buckwheat for bees; it is often neglected by them, and I think they never work on it all the day long, and therefore I conclude that bees get some honey from catnip all the time. There is not enough of it in any one place for them to get quantity enough to be observable as catnip honey, but I have no doubt it adds to the yield we get, and is excellent for the bees; therefore, I say, plant and spread it as much as possible. I take a great deal of pleasure, seeing bees work, and much interest in the cultivation of honey plants. I like to see the bees enjoy themselves, which I believe they do, far more when at work; for, when not at work, they are always cross.

Fentonville, Mich., Jan. 20, 1883.

Indiana State Convention.

According to programme, the fourth annual meeting of the State Bee-Keepers' Association commenced at the rooms of the State Board of Agriculture, Indianapolis, Ind., Jan. 10. On account of the inclemency of the weather, the members came in slowly; but the meeting was called to order a few minutes after the time set, 10:30 a. m., Mr. Cotton in the chair, with all the officers present. After some preliminary work the society settled down to business.

Mr. Buntain said he was a beginner, had come to the meeting for the purpose of learning. He was full of young America, and wanted to learn to handle bees without having to wade through the sloughs which had been traveled by the pioneer bee-keepers present, and hoped the older members would take hold of the work and push it right along.

The president called attention to the death of Mr. Bellman, a former president of the Association, and appointed a committee to take action on the matter, consisting of Messrs. O'Rear, Robinson and Mrs. Robinson, after which the meeting adjourned until 2 p. m.

On re-assembling after the dinner hour, the secretary read a communication from Prof. A. J. Cook, Lansing, Mich., on clipping queen's wings, in which he said, I have practiced this method of bee management now for years, and have yet to see the first evidence that the bees take umbrage at the proceeding. In the matter of statistics, he hoped the Society would agitate the matter and do all it could to assist the committee, appointed by the North American Society. He hoped this and all other State Associations would strive to assist the North American Society. Happily, civilization is opposed to selfishness; we are all interested in our neighbor's success. Let the Los Angeles bee-keeper put up his honey in a slip-shod shape, and the Maine bee-keeper loses by the act. The subject of the paper was discussed at some length, and it seemed to be the voice of the convention, that the clipping of the queens' wing was no hinderance in the management of the bees.

The following, from the question box, brought out a lively discussion: "Are queens reared under the impulse of the swarming fever, superior to those reared from the egg artificially?" Many of the members had tried both plans extensively, and while some very poor queens were produced artificially, with proper care, equally good ones could be reared as those produced under the impulse of the swarming fever, and this seemed to be the voice of the Society.

The question: "Are Cyprians more vindictive than the Italians?" occupied the time of the meeting at some length, and led to some very amusing incidents in the handling of bees, and while some of the members claimed to have very gentle Cyprians, all of those who had them, of known purity, testified to their ability to hold their own with any bee-master, regardless of smoke, sweetened water, or even chloroform. However, it was concluded that they had some very good qualities which were to give material assistance in producing our great expectant—*Apis Americana.*

"Dividing, or Natural Increase" was the next question of importance under discussion.

Mr. Muth thought that the first object to be sought was the honey crop, and the increase made afterward, and that very much depended on condition and circumstances. For people who paid but little attention to their bees, he thought it best to allow the bees to increase naturally, but, to those who gave the necessary care to them, the plan of a gradual increase artificially was the best plan. After some further discussion the matter was passed for the present to allow the president to deliver his address.

PRESIDENT COTTON'S ADDRESS.

Ladies and Gentlemen of the Indiana Bee-Keepers' Association: This is the fourth annual meeting since our organization; each year increasing in interest; each member being ready to give a reason for the faith that is in him, in regard to the little busy bee. Our Society is organized on philanthropic principles for the general dissemination of knowledge of the mysteries of this busy insect. A few years ago the masses would have thought it miraculous to have seen bees handled with impunity, as we now handle them; and yet we are not satisfied with our progress, nor should we be, so long as we can save the life of another colony, or cause them to produce another pound of honey.

While the winter of 1880-81 will long be remembered by the apiarist, the question that arises is, have we been benefited by our experience to the extent that we may reasonably expect to avoid another such disaster? If we have not, we have not taken the lesson that nature has offered us.

While the old elm-peeler hog could bury himself in the ground beside a log, and winter through, without much comfort to himself or profit to his owner, the improved Berkshire or Poland China cannot stand such treatment, but needs to be well housed, to give his owner a good profit, and the same may be said of all the domestic animals, and the honey bee is not an exception to this rule.

We no longer expect to get profit from the bee in the old log hive, left standing exposed to the cold northwesters without protection, no more than we would expect that the old brindle cow, that has to shelter under the leeward of a rail fence, would give profit to her owner.

Then, as true humanitarians, let us investigate in the light of science and experience, and especially the subject of wintering, for this is the reef that we have wrecked upon. In wintering, some attribute their success to ventilation, others to the extracting of bad, unripe honey, others to the temperature, and so on. Now, without entering into a discussion of this subject in this address, I prefer to leave the discussion of this subject, with all others, to this convention, merely hinting at a few subjects which I may think of importance to bee-keepers. Some of the things necessary in wintering, in my experience, are a hive of proper size, contracted according to the number of bees, and plenty of good, ripe honey, or sugar, with good ventilation, and well protected from the cold. But the question arises, what is the proper size of the hive, how shall we ventilate, and how shall we protect from the cold? with numerous other questions which this Association may discuss with profit.

I would advise all beginners to study the physiology and habits of the bee, which may be done by reading Quinby, Langstroth or Cook; and without the study of some such standard work on bees, our bee periodicals must sound much like the German does to the man who cannot speak German; but if he has studied all that has been written on the bee, he none the less needs to read some good bee paper to keep up with the progress of the age.

We cannot expect every family to take interest enough in bees to supply themselves with honey, when they, with plenty of garden room, fail to exert that energy necessary to raise the common vegetables to supply the family table, and are satisfied to live on "hog and hominy the year round." The race is not won by the sluggard, but by him who is ever on the alert and ready to exert both his physical and mental powers.

While much has been accomplished by our leading apiarists in the science of bee-keeping, there are hundreds of smaller lights scattered throughout the country with a few colonies, with their untiring zeal and energy, who have added much to the knowledge and progress that have been made in bee-keeping; and the result is, that the sweet-silvered voice of the patent hive vender with his moth-trap is no longer heeded in our land, except by him who reads not.

In our discussions I have observed that we are more inclined to speak of our success than our failures, when often our best lessons are from our failures; then let us not fail to give our experience, wherein we have failed, that others may benefit thereby.

In my observations, there is no industry in this country in which there has been more progress made in a decade, both scientifically and practically, where the product comes from the soil; and if a majority of our citizens could be induced to keep a few colonies of bees, there would be much wealth gathered annually which now is lost, to say nothing of the effects that a good dish of honey has upon the family, socially, for we are all prone to get a little sour at times, and need sweetening up, and if it could not be done with honey, a few stings would make us forget ourselves for the time being.

I would call to remembrance the death of the Rev. J. C. Bellman, the first president elect of this Association, hoping that this Society will remember him with appropriate resolutions.

While the Agricultural College of Indiana, Purdue, is experimenting with all the domestic animals, and has so far omitted the bee, I think it would be well for this Association to call the attention of the Board to the fact.

For the financial condition of the Association I refer you to the report of your treasurer, Mrs. E. Stout. And for the general work of the Association to the report of your secretary, Frank L. Dougherty, who has labored industriously for the up-building of the Association.

There has been a move in some of the other industrial associations of this State, as well as this one, to obtain an appropriation from the State, that they might be able to give their discussions to the masses, fresh from their meetings. I would, therefore, recommend co-operation with these societies in an effort to procure such an appropriation.

In conclusion, let me congratulate this Association on the great stride that has been made toward the improvement of the honey bee, and while we have not been able yet to breed them without a sting, or with a tongue long enough to reach the honey in the red clover on our deep rich soils, we have lessened the propensity to sting, and are increasing the pasture by the cultivation of many honey-producing plants; and, considering the time since the experiments commenced, I think the improvements in the bee have been equal to the improvements in any of the domestic animals.

The several particulars mentioned in the president's address were discussed at some length, eliciting many facts of direct interest to those present.

A committee, consisting of Mrs. Cass Robbins, Dr. J. H. O'Rear and J. M. Robinson, reported a series of appropriate resolutions on the death of the Rev. J. C. Bellman, a former president of the Society.

The subject of "Dividing, or Natural Increase" was again taken up, the subject leading to a discussion of the best plan of handling natural swarms. The prevailing opinion seemed to favor a basket or box in which to secure swarms that have settled.

Mr. Muth described a device which he had seen in use at Mr. Hill's, near Cincinnati, consisting of an oblong, perforated box, which could be quickly adjusted to a pole. He thought any shaped box, holding not more than a half-bushel, bored full of one-half inch holes, and leaving both ends open, would answer all practical purposes.

The opinion of the majority seemed to be that, in divisions of all kinds, the main object should be to keep all of the old bees together, that the largest amount of honey might be secured. The meeting adjourned for supper.

The evening session was called to order promptly at 7:30. The first question being that of "Wintering."

Dr. O'Rear was a strong advocate of indoor wintering, preferring a house above ground.

Mr. Shaw also sided with the Doctor, believing that the difference in the amount of stores consumed would more than compensate for the trouble and cost of the building.

Mr. Muth, Mr. Dougherty, and many others had wintered on the summer stands for years successfully. They thought that, while indoor wintering had some advantages in the Northern States, it was not preferable in this latitude.

Providing pasturage for the bees was discussed with an interest which bodes good for the future honey crops of Indiana. The value of all the honey-producing plants which grow in our climate was fully discussed. Alsike and sweet clover (*melilot*) being the favorites.

Mr. Thompson, president of the State Dairymen's Association, said he was not a bee-keeper, but the thorough discussion he had just heard called up a new line of thought to him. The dairymen are directly interested in the clover, and he thought there would be no need of scattering the seed in the fence corners and waste places, as some member had suggested, but each could greatly assist the other in the planting process, for, quoting Prof. Cook, "happily, civilization is opposed to selfishness."

Mr. Mason had not succeeded in getting a good start with melilot; thought alsike preferable.

Mr. Leaming had visited Mr. Salisbury, in Illinois, who had many acres of it sown, and who pronounced it a decided success, after trial on a large scale.

The hour having become quite late, the meeting adjourned until the morning.

The second day's meeting was called to order promptly at 9 a. m., with increased attendance. The election of officers became the order of business. All the old officers were re-elected for another term, as follows: For President, Hon. I. N. Cotton, Traders' Point; Secretary, Frank L. Dougherty; Treasurer, Mrs. E. Stout, both of Indianapolis. On motion of Dr. O'Rear, a committee was appointed to confer with the State Board of Agriculture, on the subject of larger premiums and better accommodations for the bee-keeping interest.

A communication from Dr. A. B. Mason, Toledo, Ohio, in reference to the Tri-State Fair, of Ohio, Michigan and Indiana, was referred to a special committee, consisting of Messrs. Muth, Davis and Johnson. They recommended the sending of President Cotton as a delegate to said Fair, with power to act for the Society, in the best possible manner, for the interest of the bee-keepers.

Prof. Cox, formerly State Geologist, now of California, entertained the Society with a description of bee-keeping in that State. Prof. Collett also spoke a few minutes, in his happy style, of the instruction and moral influences of the honey bee. The rest of the morning session was consumed in discussing minor subjects connected with the business.

The afternoon session opened with a discussion of the merits of comb foundation, the secretary describing the particulars of its manufacture in different forms, including the wired frames as made on the Given press, samples of which he had present.

Gov. Porter being present, was called on to address the Society, which he did. He complimented the Society on its increased attendance each year, and on the intelligent manner of its discussions; he referred to his former meeting with the Society, and of the general information he had gained during his short stay. He was greatly interested in these industrial meetings of the several State societies, and believed that they should have all the encouragement possible, as they were destined to place our State in the very front rank of industrial States. He spoke of the great improvement in the several industries; thought the Legislature should make a small allowance for each society to enable it to send our reports of the proceedings of the meetings to all parts of the State, so as to place the knowledge of the specialist into the hands of those who are unable to attend the regular meetings.

Mr. Muth informally replied to the Governor, showing that a growing demand for liquid honey was springing up—being now largely consumed in manufacturing. Among manufacturers using honey are the pork packers, for sugar-cured hams; tobacconists, bakers, confectioners, manufacturers of printers' rollers, etc.

I. N. Cotton, Dr. O'Rear, J. Kindey, Mrs. Robbins and Mrs. Stout were appointed delegates to the North American Bee-Keepers' Society, with instructions to ask the Society to hold its next session in Indianapolis.

After some appropriate resolutions for favors conferred on the Society, the meeting adjourned to the call of the Executive Committee.—*Indiana Farmer.*

* * *

For the American Bee Journal.

Best Way to Use Small Sections.

DR. G. L. TINKER.

That the readers of the Bee Journal may know why it is proposed to have the new small sections only 1⅜ inches thick, it may be well to explain how they are to be used.

I think that every bee-keeper can see that it would be a great advantage if the sections could be set down at once upon the brood frames so that the passage ways would be continuous into the sections. With broad frames or racks holding the 2-inch sections it is necessary to raise them at least ¼ inch above the brood frames, in order to admit the bees into all the passage ways between the sections. This ¼ inch space I believe to be a hindrance to the bees entering the sections and affords a place for the bees to build comb, which often interferes in lifting out the frames. It is also no little trouble to cut away these bits of comb after the section cases are taken off. Some colonies are worse than others about building comb in this space and can hardly be induced to go above it, into the sections, to work. If the passage ways between the brood frames and the sections were continuous, there is no doubt but that it would facilitate the bees in their work and result in a larger surplus.

Now, with a thin section to be used with or without separators, this space is unnecessary and the section case or rack can be set upon the brood frames so that all of the passage ways will be continuous. If a rack is used it may contain 36 to 40 sections, according to the length of the brood frame; 36 can be used on 9 Gallup frames, and 40 upon 8 Langstroth. After the bees have one rack of sections partly filled it may be lifted off and an empty rack of sections put on. The upper rack is then slid over the other one, endwise, and no bees need be killed. By tiering up in this manner, 120 half-pound sections can be used at once to advantage.

If wood separators 1-16 inches thick be used between sections 1⅜ inches thick, 9 brood frames can be evenly spaced 1 7-16 inches from center to center, in a hive just 13 inches wide, so that when the rack of sections is slid over the frames, the spaces will all be continuous. But if the section be 1½ inches thick, the frames would have to be spaced 1 9-16 inches from center to center, but the hive would have to be just 14 inches wide to hold 9 frames where 10 are ordinarily used. This would be spacing the frames too far apart, and I think would not work satisfactorily. Hence, if the sections are to be set upon the frames in the manner here proposed, the section ought not to be over 1⅜ inches thick. If used without separators, a section 3⅝x3⅝x1⅜ will hold just one-half pound. If separators be used, the size may be 3¾x3¾x1⅜, which will hold very near one-half pound.

To prevent the killing of bees, the brood frames must be brought up on a level with the top of the body of the hive, so that the rack of sections can be slid over the frames endwise. As I have used a similar arrangement to the above, I can speak from experience as to its practicability. There may be some danger of the queen moving up into the section department, but I do not think it would often occur, especially where the deeper frames are used.

Since most bee-keepers will only use a few of the half-pound sections, the first season, on trial, it would not be much trouble to prepare a few hives and fixtures for the purpose, making, of course, the hives to fit the frames in use, and then, sometime in May, set the frames and bees from some of the old hives into them.

New Philadelphia, O.

* * *

For the American Bee Journal.

The Forncrook Patent Section.

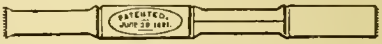
M. M. BALDRIDGE.

I have received Mr. Forncrook's catalogue for 1883, in which I find the following language: "We intend to prosecute manufacturers who infringe upon our rights to manufacture a one-piece section of any description." Also the following: "We do not intend to molest bee-keepers for using the one-piece sections they may have bought of other parties previous to Dec. 1, 1881, but caution them against buying any not bearing our stamp." The latter quotation is equivalent to saying that bee-keepers will be prosecuted for infringement of the Forncrook patent for using one-piece sections "of any description" made by outside parties since Dec. 1, 1881.

As the above is misleading, forbearance any longer to dissect the Forncrook patent, ceases to be a virtue.

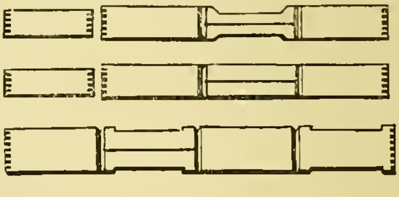
Having had more or less experience during the past 25 years in overhauling specifications and claims on "patent hives," it enables me to understand the points in Mr. Forncrook's patent. Having in my possession the Forncrook specifications and claims, I will now give the latter, which are as follows: I claim "as a new article of manufacture, a blank for honey-frames formed of a single piece of wood having transverse angular grooves *c*, longitudinal groove *d*, and recesses *b*, all arranged in the manner shown and described."

The above is what is known as a "combination" claim, being made up of parts, as follows: One (1) strip of wood: three (3) transverse angular grooves; one (1) longitudinal groove; and two (2) recesses or passage ways for the bees, with both ends of the strip "dentated" so they will "interlock when brought together." The specifications and drawings must always be referred to, to get at a proper understanding of the claims and what is meant by the following words: "All arranged in the manner shown and described." The following engraving illustrates the entire claim:



Now, it must be apparent that, the omission of any of the parts enumerated destroys the "combination," and renders the patent null and void.

I will now introduce three illustrations, as follows:



As none of the above sections possess all the parts of the "combination," they evidently do not infringe upon the Forncrook patent.

And now let me suggest another destructive element, to-wit: The omission of simply the "longitudinal groove!" In other words, the section can be made all in one piece, with both ends dentated, with the 3 transverse angular grooves, and with tops and bottoms narrower than the sides, and still not infringe the Forncrook patent! And why not omit the "longitudinal groove," inasmuch as the section is just as good without it? For my own use I always omit said groove; in fact, I would as soon use a latitudinal groove as a "longitudinal one!"

As a rule, any "combination" patent can be easily evaded; in other words, it is not very difficult to drive a "span of horses" or a "yoke of oxen" right through one! I have yet to find a "combination" patent, on bee-hives, that cannot be evaded, and still retain all the essentials. The Langstroth patent was the most difficult to evade, but even that could be done and still make the hive very practical.

Now, if Mr. Forncrook has as good sense as I give him credit for, he will never prosecute the makers, vendors, or users of the one-piece section for infringement, so long as they omit any of the parts of his "combination," as indicated in his patent, and as set forth in this article.

For one, I would like to hear from Mr. Forncrook through the Bee Journal in reply to my analysis of his patent. I have no desire to mislead the readers of the BEE JOURNAL, nor have I any desire to injure Mr. Forncrook, financially or otherwise. My only desire is simply to state facts as I find them, and without fear or favor from any one.

St. Charles, Ill.

[The BEE JOURNAL believes in the old maxim: "Right wrongs no one." In dealing out "exact justice to all," it will neither countenance *extortion* on the part of an inventor, nor allow an "*evasion*" of a legitimate patent, in order to *defraud* its owner, without an earnest protest. To do so, would only impede "progress" and discourage "invention." The one-piece section now enjoys a well-earned popularity, and, as its inventor has spent much time and money in bringing it to its present state of perfection—is he not entitled to a *reasonable* reward? We believe that all right-minded persons will cheerfully assent to this, but will not, willingly, submit to extortion on the one hand, nor countenance *dishonesty* on the other.—ED.]

For the American Bee Journal.

My Bee Cellar and Management.

REUBEN HAVENS.

My cellar is 22x44 feet, divided into three rooms. The first room is but half underground, which I use for a shop and store room. There is a large out-door opening into this room; also one opening from the kitchen. The other rooms have heavy stone walls, plastered; it is also lathed and plastered overhead. It has a tile running around the bottom, just inside the wall, cement floor; and two four light 12x14 windows in each room. My bee room is the one fartherest from the outer door.

On the north side, I have a 4-inch pipe 8 feet long; on the south side, a 6-inch pipe with a cross, or T pipe, on the outside for ventilation. Upper ventilation is given by a flue running to the bottom of the cellar; pipe hole near the ceiling. If the room becomes too warm, which it often does, I ventilate by opening the outside door, and letting the fresh air pass in through the other two rooms. In this way I can keep an even temperature.

In putting the bees away for winter, I place the hives on racks; the first tier 2 feet from the floor, and every hive is placed so that it can be moved without disturbing the others. After placing the hives, I remove the tops and leave no covering, except the quilts.

By the way, I bought a lot of hives last summer with enamel cloth covers, which I left on, when I put them into winter quarters, and on examination, a few days since, I found the moisture had condensed on the quilts and run down through the combs and out at the entrance of the hives, causing the bees to become very uneasy. I immediately stripped off the enamel covers and replaced them with covers made of worn ingrain carpet. This is the best material for covers that I have ever used. If worn, then make them double. I think keeping an even temperature and good upper ventilation, are the main things in successful wintering.

There seems to be quite a difference of opinion in regard to the right temperature, varying from 32 to 44 degrees. I find when the temperature gets above 40 degrees, the bees become very uneasy.

Onarga, Ill., Jan. 18, 1883.

For the American Bee Journal.

Sections, Separators, Apprentices, &c.

JAMES HEDDON, 173-500.

After reading a few more thoughts from others, I wish to say a little more about the half-pound sections. On page 8, Mr. Benedict, in his second paragraph, says "a prime colony will produce ⅓ more honey in one-pound than in half-pound sections." *Why* they will, he does not say; and, why they will *not*, is too long a story to tell here.

Now, I am quite sure that if I could have Mr. Benedict in my yard three days next summer, I could convince him that more comb honey can be procured in pound or half-pound sections, than in any larger receptacles. If he is correct, then I am wrong, and half-pound sections will soon be among the "things that were." I shall use a few of them next season. I think that extra cost and manipulation is the main objection to their use. But, as I can use them on the same hives with my pounds, and in the same size crate, I shall feel bound to make some comprehensive tests, regarding them, next season.

On page 18, the editor tells Dr. Tinker that this section "requires extra capping, and comb foundation; perhaps too much to be profitable." My experience with combs, down as thin as ⅞ in. has convinced me that (some how or other) the bees finish sealing the thinnest combs first, and apparently easiest. Also, I have demonstrated that the more foundation I can crowd into use, the better for my yield of comb honey, to an amount far exceeding the extra cost.

Dr. Miller (one of those who "get there") can imagine the queen making her home and "nest" in the sections, if they are so thin as would be needed for half-pounds, of 4¼x4¼ square. I would tell the Doctor to go ahead, and fear no brood in the sections, of any thickness; but I object to such thin comb, for reasons I have already given on pages 5 and 27. I wish I was as sure of a good crop in 1883, as that, with any thing like reasonable management, we shall have no brood troubles.

Let me say to Dr. L. C. Whiting (see page 42) that if he will try the process of putting up honey in large frames, and then cutting up and fitting into sections to be properly finished up by the bees, he will want to forget the day the thought first entered his mind. Try it, Doctor, (just a little) and report.

Mr. Caldwell (p. 8) says, that in some seasons bees were reluctant to work among separators, and wonders if as much honey will be stored with, as without them, and yet the same article is headed "Separators a Necessity." Dr. Miller and Capt. Scudder, (page 20) are of the same opinion. I have no fears about straight combs, but two bee-keepers (who also "get there," and in whom I place great confidence,) assure me that my fears of their damaging my crop, is groundless. One of them presents the best arguments I have ever heard, and presents a little different manner of their use and manipulation; and, while I am putting considerable money into such experiments, as I deem essential to the proper instruction of my class of students for 1883, I shall add $10 for tin for separators, and make one more test on a broad and improved scale. If I find my former views changed in any way, I shall be only too glad to tell all about it. If not, I shall consider a $10 box of tin, a solid perch upon which to crow, "I—told—you—so."

On page 36 Dr. Miller tells us some thing about "Who should Keep Bees." When I read that, "I threw up my hat," and shouted. My wife asked "What *is* up?" I replied, "A pen picture of real life; an article worth twice the price of the BEE JOURNAL for a year, to every reader; an antidote for Blessed Bees." Every one should read that article and not get discouraged, for the article is the best of encouragement to all who should embark in the business, and who understand the article rightly.

On page 6, Dr. Besse points out "another advance step," as one very desirable to be taken. That there is a great demand for the services of competent apiarists, I very well know, from the numerous applications which come to me. All are willing to pay high wages, if they can get the right sort of a man. The Doctor maps out a plan by which he thinks the right man can be detected from the wrong one. From all that I know of the apiarian student-apprentice business, together with diplomas and seals of presidents, secretaries and whole societies, committees and all included—all these seals and signatures, with all the expense and trouble of the red tape circumlocution, mentioned by the correspondent, would only throw suspicion upon any one who might apply to me. I should say, Where did you *practice* honey-producing? With Mr. G. T. Success. Good. What recommendations can you give? This paper. It reads: "The bearer, Mr. Henry Goodwin, has spent five months in my apiary of 200 colonies, having passed through the season's operations, from unpacking the bees in the spring to repacking them for winter quarters. I have found Mr. G. a young man of integrity and tact. He has studied the theory of apiculture under my supervision, and has been with me in practice through spring preparation, queen-rearing, surplus storing of both comb and extracted honey, transferring natural and artificial swarming, etc., together with all the mechanical labors connected with the production and fitting for market of 20,000 pounds of surplus honey. While he has yet more to learn, I consider him fully competent to *successfully* manage an apiary of 100 colonies, spring count. Signed, "Get There Success."

The above is the sort of diploma I want.

Is this the firm of Capable & Rich? Yes sir. You have advertised for a salesman, I believe? Yes sir; we need one badly. I am here to make application for the place. What testimonials of character and ability can you give? He takes out a document, covered with the seals and signatures of all the officers and committees of a popular commercial college, avowing that the bearer, "Studious S. Slowmotion" is everything that a college professor imagines a young commercial man ought to be. It is all lined and trimmed with red tape. The proprietor drops his head, looks disappointed, and says, I will consult our head salesman, and give you an answer in a moment. John; here is a young man seeking the place, where we so much need help, and here is his testimonials. John reads a little ways, and says: "There is no use to try any more of those commercial college graduates; they usually have less than one-fourth of the native tact of a boot-black, and they have it all to learn after they get here. We don't want any more stupid apprentices; we want an experienced man, one who has had practice, and is not all theory."

About such dialogues as this occur daily in our large cities, I am credibly informed. I like the Doctor's ideas, all but the diplomas and signatures, which I think entirely useless. The results would show that a bee-man is a bee-man "for a' that, and a' that," and that a failure could pass the examination, get the signatures and yet be a failure "for a' that."

On page 43, Mr. Chas. Follett gets up "another step higher." I like the solid metallic ring of "his" short reply. I believe he has reached a point where he can defy failure; but his article gives conclusive evidence of at least two points; first, that, if after 3 years of apprenticeship, he blundered to a loss of $300 to $500, either he did not become a student as well as an apprentice, during the time, or else his teacher was incompetent. Secondly, in any case, it shows the great value of experience before we invest our capital.

In chemistry, 3-7 of A, and 4-7 of B, mixed together, make a healthful nutritive food, but 3-7 of B, and 4-7 of A are together a deadly poison; so apicultural success will be reached only by a proper mixture of thought and labor. The apiarist, in the backwoods, with no teacher, no reading matter, no thought to clash with and sharpen his own, will fail; so the commercial student, who is buried under a mass of books and teachers, having no store or fabric of merchandise with which to practice, soon forgets even how to "swap jack-knives." Any apiarist, to do justice to student apprentices, must invest a few hundred dollars in experimental fixtures; the extra labor, thus incurred, the students will perform, and should, in justice to them, have that extra labor supplied them.

Mr. Follett will think five months (which constitutes a season here, as we unpack about May 1st, and repack the last days of September) rather a short time to become proficient in the art of honey production. My limited experience with students proves that this five months of study and practical experiment puts them on the right track, and prepares their minds for receiving all new truths right end foremost. All of my students, who have commenced bee-keeping, are to-day succeeding; two will begin in apiaries of mine, on shares, this spring. My faith is thus great; with these five months instruction, any reasonably apt man can have of me an apiary of 100 colonies on shares, a position which will pay him more than high wages, one year with another, and one in which he can "blunder" and finish his education at my expense. Of course I will direct the operations. I shall get better results than to sell the bees. It will not take five months to convince him that comb-honey production, when properly pursued, pays much better than extracted.

Dowagiac, Mich., Jan. 22, 1883.

* * *

For the American Bee Journal.

Small Sections, Best Bees, etc.

DR. J. R. BAKER.

We are a great people, but, withal, a little eccentric; and I think I never saw the latter characteristic crop out more prominently—at least in bee-keeping circles—than in the half-pound section business.

Because two or three honey-producers, who believe in the grand principle of ever marching forward, and who like to experiment and indulge in novelties, put a few half-pound sections of honey, in nice shape, on the market, and found a good sale for it, why, about half of the bee-keeping fraternity seem to have gotten half-pound section on the brain!

It seems to me that Capt. L. H. Scudder, of New Boston, Ill., Mr. F. C. Benedict, Dr. Miller, James Heddon and others, in the week or two last past have taken the sensible view of the matter, as expressed in the BEE JOURNAL, and now comes, in the last issue of the BEE JOURNAL, Mr. Frank L. Ripley, of Boston, Mass., with a clincher, which it is hoped will act as a sedative on the over-anxious victims of the half-pound section craze.

It is contrary to good judgment to expect the half-pound sections to ever become universally in demand; for, there are a few who always seem to think that acting ridiculously is the displaying of wisdom, the majority of honey consumers will prefer to buy just as little wood as possible, at from 20 to 30 cts. per pound. The Irishman said that he wanted just as much whisky as possible and as little quinine in his prescription as would make it legal. So the most of the honey buyers will want as much honey as possible and as little wood for the money.

In view of this fact I think the majority of bee-keepers had better stick to the one and two-pound sections, for awhile yet, at least. I know one that will, at all events.

I have looked on with a good deal of interest in the discussion as to the merits of the different varieties of bees, that has been indulged in with so much ability and warmth by some of the apicultural gladiators in our country; and the result of the discussion, to my mind, has been a complete routing of the three-band advocates. While the thorough-bred Italians, with their beautiful yellow bands, are, as a rule, very docile, and always pleasing to the eye of one who loves the beautiful, I am fully persuaded that for honey-gathering the dark-colored (or hybrids, if you please) are much superior, as a general thing, to the golden beauties. While this seems to be the experience of a majority of our experienced apiarists, it is *most decidedly* mine. That this is true, I very much regret, for if there is anything that I love to look upon, it is a colony of beautiful yellow bees.

Now, while what I have said as to the superiority of the dark bees as honey-gatherers, I am much inclined to think there is a remedy for it, and that is, in the selection of the good honey-gatherers from among the yellow bees as breeders, and the merciless beheading of every queen whose progeny prove to be indifferent workers. No difference, if her bees have forty gold bands, let her go to the "block," unless the bees are good for business. I am quite certain that it is the in-breeding of the American Italians for bands, instead of for *workers*, that has wrought the mischief in the ranks of yellow bees. If the yellow bees are expected to keep abreast of their more homely and irascible neighbors as *business* insects, they must be judiciously selected.

There are good workers among the most beautiful yellow bees. I know, and if the breeders of these would breed from nothing but such, there would soon be less to say about the yellow bees being inferior to the dark as workers. The trouble has been, that if a queen breeder of Italians had a golden queen whose progeny were a beautiful yellow, she was valued very highly, without reference to the business qualities of her bees at all. All this must be speedily changed, if the golden-banded beauties are to hold a place in the affections of our best apiarists.

Let some man well-fitted for queen-breeding give us a good strain of golden Italians and he shall be called blessed, by one lover of the beautiful, at least.

There is no better locality for honey production than near the upper Mississippi. I believe the honey reports of the country will prove this assertion. But while this is true, I am a victim of chronic, malarial poisoning; and I am fully persuaded that I must find another field. I must go to some point where malaria is a stranger; but, while this is true, I must also go where bees do well. To rob me of the pleasure of keeping bees, on quite an extensive scale, would be to deprive me of a world of pleasure, to say nothing about the pecuniary consideration. I flatter myself that I am a successful bee-master; and I am looking for a pleasant locality, good for bees, and entirely free from bilious difficulties.

Dr. F. A. Grove, of Kirksville, Mo., seems to have the right notion about keeping bees for profit. He keeps bees, poultry, a little other good stock, raises a little small fruit and cultivates a good vegetable garden. I am quite certain this is better for the majority of bee-keepers than to keep bees alone. My advice to all beginners is: go slowly, and learn as you go. He who rushes into a business up to his eyes, of which he knows comparatively nothing, is apt to get his profits all on the debtor side.

Keithsburg, Ill., Jan. 20, 1883.

SELECTIONS FROM OUR LETTER BOX

Swarms Went to the Woods.

I have 27 colonies; 19 on the summer stands and 8 in the cellar. I wish to try both plans, and report in spring. They gave me a very poor yield last year, owing to the cold late spring. During August, I was in the West, and lost 6 or 8 swarms. I will try and do better during the coming season, if I can. J. Bishop.

Greenwood, Ind., Jan. 20, 1883.

The 2-lb. Sections Good Enough.

We have been very much interested in the half-pound section question, but have decided to adhere to our 2-lb. sections, for the present at least. Taking everything into consideration, the change does not promise to terminate in a success financially.

Greiner Bros.

Naples, N. Y., Jan. 19, 1883.

My Way of Wintering Bees.

I always winter my bees on the summer stands. This is my third winter, and I have not lost any yet. My plan of preparation is as follows: After the boxes are taken off, I put on Mr. Hill's device; then cover the frames with a piece of as thin factory as I can get (large enough to come outside of the hive, after the cap is on). On the top of this, I place a cushion, 4 inches thick, filled with chaff, and give plenty of ventilation above the cushion. They are on their summer stands, and have a good roof for shade, supported at each corner by a small post, the outer case is easy put on. For the case, I take best canvas, 40 inches wide; this is wide enough for 2, stretch and tack this down tightly, and it will turn rain or wind as good as boards. It is much cheaper and more quickly done. They get all the fresh air they need at the entrance. As it is the same size as in the summer, with a small tube or box from the entrance to the outer case, the bees can fly whenever a warm day comes, although mine have not had a flight since about Nov. 15th; they are taking a good rest, to awake during the first warm days of spring to come forth with the early flowers, with their glad hum, ready for another year's labor.

S. C. Frederick.

Coal Vale, Kansas, Jan. 22, 1883.

Statistics—Planting for Honey, etc.

I have been trying to ascertain the number of bees in Lucas Co., Iowa, this winter, and this will show how well I have succeeded. I have found 28 men that keep bees; they represent 661 colonies; 72 of them have bees in box hives and log gums; the remainder in frame hives, 90 per cent. of the latter in Langstroth hives; 6 of the latter take a bee paper and represent 448 colonies of bees, and have taken the past season between 9 and 10 tons of honey. I have made out my report, the best I could, and sent to Dr. C. C. Miller. Bees are wintering well, so far; there is one thing that bothers me a little. In 3 or 4 of my hives I find thin honey running out at the entrance. What is the reason? Mice cannot get in. Tell me the cause and remedy. It is too cold to open the hives to see. I sowed 3 lbs. of catnip seed, last fall, along the creek banks, in ditches and waste places. Will it pay? Will sweet clover come up this spring, if sowed in February?

Wm. Malone.

Oakley, Iowa, Jan. 16, 1883.

[The "thin honey running out at the entrance" is probably condensed moisture that could not escape at the top. In running down over the combs it came in contact with honey and became *sweet* water. This will make the bees uneasy, and during the first warm weather you should place some good absorbent over the frames. This is about all you *can* do, until an examination can be made in the spring.

Of course "it will pay" to plant forage for bees. Sweet clover planted on the snow in early spring will do well; freezing the seed is beneficial to it.—Ed.]

My Years' Work.

I commenced the spring of 1882 with 2 colonies of bees and increased to 12 strong colonies, and got 150 lbs. of comb honey, in 1-pound sections, and 150 lbs. of extracted honey. I sold the comb honey for 20 cts. per lb.; the extracted for 15 cts. at home. I use the Langstroth hive, of my own make. My bees are wintering on the summer stands, packed in clover chaff.

George N. Marsh.

Huntley Grove, Ill., Jan. 24, 1883.

Do the Drones Accompany a Swarm?

I have just finished reading the pamphlet entitled "Dzierzon's Theory." I appreciate the theory of Dzierzon (and indorse it) for its valuable instructions, but I want to ask whether drones (male bees) issue with the first swarm in "natural swarming?" Dr. H. R. Dorr.

Worden, Ill., Jan. 19, 1883.

[This is governed by the circumstances. Usually the old queen and workers, old and young, compose the swarm, and therefore they have no need of drones. In such cases the drones remain in the hive to fertilize the young queen, whose "wedding flight" occurs in a few days after the swarm leaves. If the old queen is unable to fly (from her wings being clipped, or some other cause), then the bees, after returning to the hive, will sometimes take the young queen with them, when they issue again. Then drones, being necessary, wil also go with the swarm.—Ed.]

Duty on Beeswax.

It is within my knowledge that in view of the great rise in price of wax in the United States that arrangements were being made by a large firm of merchants in London, to place considerable quantities of beeswax on the American markets. The only obstacle, I believe, was the duty.

Thomas B. Blow.

Welwyn, England, Jan. 10, 1883.

[As wax is so much used in Europe, we did not think that there would be a chance of getting any there.—Ed.]

A Continuous Blizzard.

We are having a blizzard here at present; averaging 10° below zero, during the past few days; but my bees are in a sawdust bee-house and doing well. We have had continuous sleighing since the last of November. No practical apiarist can afford to do without the American Bee Journal. A. Burrill.

Cuba, N. Y., Jan. 24, 1883.

Half-pound Sections.

I am sorry to see the half-pound sections favorably spoken of by any one. There may be a demand for them in some places, but I am quite sure that in the Western States they are too small. J. J. Tucker.

Arrow Rock, Mo., Jan. 20, 1883.

Trying Theories on Wintering Bees.

Saturday night it thawed and rained a little with the mercury at 38° F., but early on Sunday morning the wind changed to the west, blowing a perfect gale, which has been kept up ever since. The mercury dropped below zero and this morning it was 12° below. Since Nov. 11 the mercury has not been above 42°, so that the bees have had no chance to fly. All seem to be wintering well so far, but if our winter

keeps on till April, as it has begun, all will know of how much value their pet theories are, regarding wintering bees. G. M. Doolittle.
Borodino, N. Y., Jan. 23, 1883.

Bees Quiet Yet.

I fear that unless the bees have a flight before long they will not winter well, although many of them are quiet yet. Fay Kennell.
South Gates, N. Y., Jan. 20, 1883.

Best Hive for Comb Honey.

Dear Editor:—As a new subscriber to your very valuable and instructive Bee Journal, I want more light. Will you please give your opinion which is the best form of frame—the deep or shallow, when we have in view to obtain the most comb honey only? My purpose is not to get extracted honey, but the most profit from the use of sections.
H. B. Hammon.
Bristolville, O., Jan. 22, 1883.

[We prefer the Langstroth hive and frame for all purposes, and more especially is it well-adapted to the production of comb honey. With a shallow frame, the bees are more easily induced to work in sections, over the frames. For side storing, the Langstroth broad frame is just the right size to hold 8 one-pound sections. Other sizes can be used, just as well as in any other hive.—Ed.]

Bees in the Cellar Wintering Well.

Messrs. Crocker & Blake, of Boston, have kindly sent me a half-pound section measuring 3½x3 1-16x2. I'm afraid Mr. Heddon is mistaken. I suspect there will always be a larger market for one-pounds than for the half-pounds; and if the latter is over-stocked, the one-pounds will bring the highest price. Bees are wintering nicely in the cellar, so far.
C. C. Miller, 174-202.
Marengo, Ill., Jan. 9, 1883.

Bees Doing Exceedingly Well.

Bees did remarkably well last year; one man got about 13,000 lbs. from 100 colonies in the spring, and increased to 200; another got 375 lbs. from 2 colonies in the spring, and increased to 19; another told me he had cleared $800 on 60 colonies, in honey alone. B. T. Baldwin.
Oskaloosa, Iowa, Jan. 22, 1883.

Poor Season for Honey.

We have thus far had quite a pleasant winter, although it is pretty cold, and growing colder, with a steadily increaing depth of snow. Last season was a very poor one here for honey; there was an abundance of clover, but the weather was too cold for it to secrete honey. I obtained only about 3,000 lbs. of comb honey from 90 colonies, and increased them to 106. My bees are wintering nicely, so far; I winter them in a large cellar under the dwelling house; the cellar is very damp, having in it a large open cistern, but I keep it well ventilated. Bees went into winter quarters pretty light in stores, therefore, I look for a favorable spring for them. Perhaps I shall be disappointed, but I shall make observations in this direction. Last winter they were *unusually* heavy, and the spring was one of the coldest and most backward I ever saw. B. T. Davenport.
Auroraville, Wis., Jan. 20, 1883.

Honey and Beeswax Market.

Office of American Bee Journal,
Monday, 10 a. m., January 29, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—Extracted, dark 7c. light, 9c. here.

BEESWAX—It is quite scarce. I am paying 30c. for good yellow wax, on arrival; dark and off colors, 17@25c.
Al. H. Newman, 923 W. Madison St.

CINCINNATI.

HONEY—There is no excitement in the honey market, but sales are fair to our regular trade. Offerings are plentiful of extracted and comb honey. Extracted brings 7@9c. on arrival. The sales of comb honey are very slow, although there is a large supply of first-class quality on the market. It brings 12@18c. on arrival.

BEESWAX—Comes in slowly and brings 20@30c. per lb., according to quality. Chas. F. Muth.

Quotations of Commission Merchants.

CHICAGO.

HONEY—January month, and still there is a large surplus of comb honey on the market. Prices are weak owing to large offerings, and anxiety on the part of shippers and holders here to realize on the product. Extracted honey is steady, but the demand is light.

We quote: white comb honey, in 1@2 lb. sections, 17@18c. Dark comb honey, hardly any demand. It is held at 12½@15c. Extracted—White brings from 9@10c.; dark, 8@9c.; kegs, half-barrels and casks bring about same price.

BEESWAX—Yellow, 30@32c.; dark, 27@28c.
R. A. Burnett, 161 South Water St.

SAN FRANCISCO.

HONEY—Nothing of consequence is at present doing. There is no special inquiry, and no selling pressure, unless it is on off qualities.

White comb, 17@20c; dark to good, 11@13½c; extracted, choice to extra white, 8½@9½c.; dark and candied, 7@8c.

BEESWAX—We quote 25@28c.
Stearns & Smith, 423 Front Street.

ST. LOUIS.

HONEY—Strained, at 6@7½c., was salable—one lot of 17 bbls. bringing inside figure; but comb, very dull at 16c. to 18c.; and extracted do., 8@9c.

BEESWAX—Steady; choice, 27@27½c.; dark, 20@22c.
W. T. Anderson & Co., 117 N. Main Street.

CLEVELAND.

HONEY—Has changed in price a very little, we find it necessary to sell all grades about 1 cent per ℔. less. Best white, in 1 ℔ sections, 20@21c. per per pound; in 2 lb. sections, 18@20c. Extracted is very dull indeed, hardly any sale.

BEESWAX—Scarce, 28@30c.
A. C. Kendel, 115 Ontario Street.

NEW YORK.

HONEY—There is very little stock here and the movement only of a peddling character.

We quote: White clover, first quality, 1 ℔ boxes, 24@25c; fair to good, 22@23c.; buckwheat, 15@17c. Extracted, clover, 10@13c.; buckwheat, 9@10c.

BEESWAX—The supply is not large and prices firmly held for prime lots.

Western pure, 30@32c; southern, pure, 31@33c.
D. W. Quinby, 105 Park Place.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—Our supply is gone; we have none to quote.
Crocker & Blake, 57 Chatham Street.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the Bee Journal.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1883, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with $6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For four subscribers, with $8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with $10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly Bee Journal for one year.

To get any of the above premiums for the Monthly Bee Journal send double the number of subscribers, and the same amount of money.

Emerson Binders—made especially for the Bee Journal, are lettered in gold on the back, and make a very convenient way of preserving the Bee Journal as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

Sample Copies of the American Bee Journal will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

OLDEST BEE PAPER IN AMERICA
THE AMERICAN BEE JOURNAL
ESTABLISHED IN 1861

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THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

Moving Bees in Winter.

As we have quite a number of queries about moving bees, and the best method of preparing them for shipment, we will give some directions, as we have often done before, but which seem not to have been seen by those who now send in questions on the subject. Mr. T. F. Kinsel, Shiloh, O., writes thus:

> I am wintering my bees in the cellar. I expect to sell some, and move 6 to 8 miles soon, if it can be done with safety. How shall I proceed? We have good sleighing, and they could be drawn on a sled. Would it be better to wait until spring? Ought they to be placed in a cellar after removing, etc.? Will the unavoidable jotting in moving hurt them?

We cannot advise the removal of bees, in any manner, during a season, when they cannot have a good flight immediately afterward. We would much prefer running the risk of breaking down combs, in the early spring, over rough roads, than to risk their disturbance in winter. It *might* do to move them on a sled over the snow, but all the chances are against it.

Here is another letter, asking similar questions, from Mr. M. E. Buck, McLean, Ill.:

> Bees have done well here during the past summer. The spring was very cold and backward. I commenced with 23 colonies, spring count, and increased to 50, by natural swarming. My bees are the natives, mixed somewhat with the Italians. I am using the Mitchell hive. I have taken 1,600 pounds of comb honey; a good part of it in one-pound sections. The greatest yield from one colony was 90 pounds in one-pound sections. For wintering, I am trying the plan of covering my hives over with hay or straw, on the summer stands. I want to ship my bees to Kansas. Would it do to ship by freight? Which is the best way to pack or fix them, where there are 50 or 75 colonies put on one car? Would it do to pack or heap them together? Is Kansas a good place for bees? I intend to go there and go into the business.

Some parts of Kansas are good for bees, as shown by reports from *some* bee-keepers there. The best time for shipping bees is in April, or quite early in May, before the combs are too heavy with brood; but with proper care in preparing them and ordinary usage in handling, they may be shipped at any time with comparative safety, except in cold weather, if properly prepared for the journey.

The first work of preparation is to go through the hives and extract about all the uncapped honey, as the least daubing will prove fatal to the bees; then procure a block 1 inch square, and as long as the hive is wide, in this cut notches and tack in the bottom of the hive, in which to place the frames to keep them steady; now select the new combs and those heavy with brood or sealed honey, secure them well in the frames with strip-binders, and place in the hive; tack the ends of the frames firmly to the rabbets on which they rest; dip the blanket in clean water, lightly wring, fold about six thicknesses, and lay on the front ends of the frames.

If the hive has no portico, leave off the cover, and use wire cloth instead, nailing on top of that, three one-inch strips, two inches wide—one across the center, the others across each end, to insure ventilation when piled on each other. Now tack wire cloth over the entrance, and your bees are ready for shipment.

If the hive has a portico, prepare in the same manner as above, except to bore a 1½ inch hole in each side of the brood chamber, and also in the cover, which will be used in place of the wire cloth over the frames; the holes to be covered inside and outside with wire cloth, to admit of ventilation. Leave the entrance open the full size, but cover the entire portico securely with wire cloth, leaving free access to it from the interior of the hive; care must be taken, however, to bore a 1½ inch hole under the roof-board of the portico, and left open, to allow free ingress to the interior of the hive, as the entrance beneath may become choked up, and the cluster of bees, with the queen, die of starvation through inability to get at the honey in the hive.

Hives made with porticoes are much better for shipping bees, for it allows them to drag out the dead, cleanse the hive, and, to a great extent, prevent dysentery. Prepared in this manner, full colonies may be shipped at all seasons, from May 1st until Aug. 10th, with perfect success. They should be sent by freight, and loaded with the frames running lengthwise of the car—the end of the frames pointing towards the engine. If packed in the car the other way, the "bumping" may break the frames down. Old and tough combs are best for shipping. Express charges are too high, usually, except for short distances.

Mr. G. Damkohler, Clarence, Mo., remarks as follows:

> I intend to move to Florida in March, and as it may be quite cold here at that time, will you please to give some directions, in the BEE JOURNAL, how to prepare bees for shipment in winter? I heard, a few days ago, that a whole car load of bees passed through here, on their way South. Perhaps you know something about that shipment.

The trouble will be to prepare them for the journey so early. In Missouri there may be some warm days when you can do so, but here in the North, it would be too much to expect. To the foregoing general directions for shipping bees, we direct attention.

Here is another letter of inquiry from Mr. T. Thurlow, Lancaster, Pa., who asks about moving bees by rail in winter. He says:

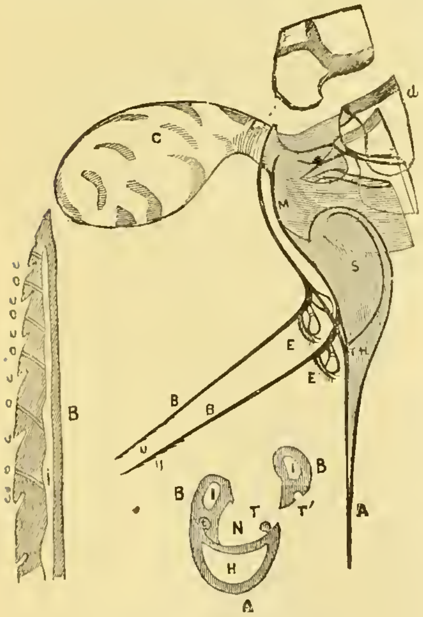
> I am going into Maryland in February, a journey of 200 miles. My 14 colonies of bees are in double-walled hives, with chaff cushions on top. The question with me is, whether to leave the cushions on, or to fasten down the frames, take the cushions off and give them the whole cap to roam around in, with holes through the cap, covered with wire cloth. Which?

The answer given to the preceding questions will apply to this. We do not think it reasonable to expect weather warm enough to prepare bees for shipment during *this* month. If the weather was warm enough not to chill the brood, if they have it, it would be best to give the bees the cap to cluster in; especially would it be desirable, if the combs should break down, to give them space to cluster in, and thus, perhaps, save the entire colony.

The Sting of the Honey Bee.

A correspondent has sent us the following descriptive article on the above subject, taken from an English periodical entitled *Good Words:*

> If we press the abdomen of a bee, so as to cause the sting to protrude, we should naturally think that the sharp, dark-colored instrument was the sting itself. This, however, is not the case. The real sting is a very slender instrument, nearly transparent, keenly pointed, and armed on one edge with a row of barbs. So exactly does the sting resemble the many-barbed arrow of certain savage tribes that, if the savages had possessed microscopes, we should certainly have thought that they borrowed the idea of the barb from the insect. What we see with the unaided eye is simply the sheath of the sting. Many savages poison their spears and arrows, and here also they have been anticipated by the insect. But the sting is infinitely superior to the arrow poison. No poison that has yet been made, not even the terrible wourali, or curare, as it is sometimes called, can retain its strength after long exposure to air. The upas poison of Borneo, for example, loses its potency in two or three hours. But the venom of the sting is never exposed to the air at all. It is secreted by two long, thread-like glands, not nearly so thick as a human hair, and is then received into a little bag at the base of the sting. When the insect uses its weapon it contracts the abdomen, thereby forcing the sting out and compressing the venom-bag.



The Sting of the Bee.

> By the force of the stroke which drives the sting into the foe, its base is pressed against the venom-bag and a small amount of poison driven into the wound. The barbed weapon cannot be withdrawn, and the whole apparatus of sting, poison-bag and glands is torn out of the insect, thereby causing its ultimate death.

The Honey Market in England.

The following letter will be very interesting to our readers:

> There is not much English honey to be found on the market, even the largest producers, the most prominent bee-keepers, have had none to sell this winter. Mr. Cowan wrote me the other day, saying he had some in 1 lb. jars to offer at 1s. 3d. (30 cts.) per pound. English comb honey in sections of 1 lb. to 2 lb., bring from 1s. 6d. (36 cts.) to 2s. (48 cts.) per pound; but, even at these prices, it is very seldom 1,000 lbs. can be found in one parcel, or in even one neighborhood, so that if a firm confine themselves to English honey alone, they must, of necessity, be content with very small operations.
>
> West India, Mexican, Chilian, etc., honey, in barrels containing from 250 lbs. and upwards to 600 lbs., have been selling at auction, upon Mincing Lane, at from 28s. per 112 lbs. (6 cts. per pound) to 46s. 8d. (10 cts. per pound). A parcel of 73 barrels of about 600 lbs. each, were shipped from Tuxpam, Mexico, to New Orleans, thence to Liverpool, and from Liverpool to London, by rail, consigned to Messrs. Geo. Hooper & Co., upon whom the shipper drew a 90 days draft through Messrs. Baring Bros., at the rate of 25s. per cwt., about 5½ cts. per pound, but the honey was simply filthy with dead bees, etc., so that Messrs. Hooper very properly declined to accept the draft. Messrs. Baring Bros. have, through their brokers, been hawking this honey about, and would, I think, be glad to close it out at 5 cts. This class of cheap, foreign honey has rather improved the market for finer grades, because buyers are getting so that they will not have the poor grades, at any price.
>
> California honey has been in good demand; one sale, a large one, of Wilkins' honey, sold in Liverpool at 18 cts. per pound. There never was but one parcel of California comb honey brought over here, and that was a parcel of 100 cases by Messrs. Thurber & Co., but they sent it all back to New York two years ago, because it was badly broken, and had to be repacked, which only could be done there. We would gladly pay cash for the grade known in California as "Extra C.," 20 cts. per pound, net here. California strained, in 5-quart tins, and barrels of about 250 pounds, bring from 10 to 18 cts. per pound.
>
> There has been but very little Western honey imported here, as yet. Nor has there been any honey without comb imported from the Eastern States. Before Christmas, we had about 1,200 cases in all; 700 from Boston, at 23 cts. per pound; 450 from Philadelphia, at 22 cts. per pound; and 50 from New York at 21 cts. per pound. It was all very satisfactory, and arrived safe and sound. We are now entirely out of the glass-sided boxes, and could sell many more cases, at from 28 to 30 cts. per pound, if they were to be had. We have been obliged to go to Hamburg, and buy from those fellows you have seen go around with a wooden tray upon their head, selling honey. We buy it from them in straw supers, and cut out the combs, for repacking in jars.
>
> I wish you would come over next summer. We are to have the International Fisheries Exhibition here under the patronage of the Queen and the presidency of the Prince of Wales, and at Amsterdam, they will have a great International Exhibition under the patronage of the King of the Netherlands. At the latter there is to be a great honey show from all parts of Europe. You must come; you have been appointed one of the judges, Mr. Editor.
>
> Now when you come, this time, you can arrange it to make some money. Bring over a consignment of comb honey, any shape, so it is white and nice. I will sell it all for you, so that you can take the money back in your pocket, and at a good profit. W. M. Hoge.
>
> London, England, Jan. 11, 1883.

We should be delighted to do as Mr. Hoge suggests, but with a Weekly Bee Paper on our hands, it is impossible. Our last visit cost us over a thousand dollars, in money, besides months of valuable time, but we have the consolation of knowing that it was well spent in developing the market for American honey; now, some one else may go and reap the harvest. We would, were it possible.

☞ Attention is called to our *new* and liberal advertising rates for 1883.

Bee-Keeping in Egypt.

During the past year Egypt has been brought into prominent notice by the events of the war. It is one of the oldest countries, and is the "bridge" of three continents, Asia and Africa it links by land, and by the Suez Canal it lets European commerce through to the Indies and Australia. In it, the haughty Pharaohs have erected proud structures to perpetuate their names and deeds throughout all ages.

But what a sad contrast, between the land in its era of monuments, and Egypt of to-day! How fallen, since the time that Joseph sat on its throne next to Pharaoh. What shadows have cast their gloom over the land since that time! Perpetually under the domination of foreigners: the Assyrian, the Persian, the Macedonian, the Roman, the Arabian, the Georgian and Tartar slaves, and the indolent Turk. But its fertilizing waters still are pouring into the many tributaries of the White and the Blue rivers, to be wafted down and deposited by the Nile, in Lower Egypt. The once fertile valley of the Pharaohs, with its 4,000 towns and cities, can yet produce as perfect a flora, when properly irrigated. It is still the Eden of flowers. A correspondent, who has visited that country, says:

> As a commercial country, it possesses many advantages: bees and honey still forming an important article of trade. The verdure of Upper Egypt generally withers at the end of four or five months, and commences earlier than in Lower Egypt. In consequence of this, the Lower Egyptians collect the bees of several villages, in large boats; each hive having a mark by which the owner recognizes it, they commence the gradual ascent of the Nile, stopping whenever they come to a region of herbage and flowers. At break of day the bees issue in thousands; and busily collect the sweets of the flowers, which are spread in luxuriant profusion around them, returning to their hives laden with honey, and issuing forth again in quest of more, several times during the course of a day. Thus, for three or four months, they travel in a land of flowers, and are brought back to the place whence they started, with the delicious product of the sweet orange-flowers, which perfume the Said, the roses of Faioum, and the jessamines of Arabia.

Nature still possesses her charms in the historic Valley of the Nile, which has always been the great magnet of the human race, as the land of natural resources. But the inhabitants are poor indeed—no better than slaves. The correspondent adds:

> They not allowed to make use of corn and rice for food, since all that they can raise is demanded by their masters. Indian millet, forming a coarse bread, water, raw onions, sometimes a little *honey*, cheese, dates, and sour milk, form their constant, and only food. A shirt of coarse linen, dyed blue, and a black cloak, a cloth bonnet, with a long red handkerchief rolled around it, form their costume.

Such a population, dwelling in miserable hovels, moving among the monuments of ancient grandeur, awaken in the mind of the stranger a painful interest. The bees and their owners, like the pyramids, defy modern civilization, and, for management, as relentlessly point us back three thousand years ago. With their clay cylinders for hives, their keepers but mock at modern bee culture, and laugh to scorn the progressive ideas of the nineteenth century.

Judicious Use of Comb Foundation.

Mr. Sylvester Marshall, of Pratts' Fork., O., propounds the following questions:

> Which is the best kind of comb foundation to use for getting extracted honey—drone or worker? How thick should it be to obtain the best results?

Drone comb foundation has been used, to some extent, but now it is entirely discarded; the worker-cell comb foundation answers every purpose, and as drone cells in a hive is a temptation to drone-rearing when such are not wanted, it is preferable not to have it there for any purpose.

Experience has demonstrated that comb foundation, for the brood chamber and extracting, should be about 4½ feet to the pound, with a thin base and heavy side walls. This is the most desirable for economy in the use of wax and rapidity of comb building by the bees.

Considering the start given to a colony of bees, by a judicious use of comb foundation, the certainty of having the combs all built straight, the ease with which the number of drones produced by a colony may be controlled, no one can justly intimate that we are not making prodigious strides in placing bee-culture among the scientific and profitable occupations of the present progressive age.

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Letter from Switzerland.

The talented and gentlemanly editor of the *Bulletin D'Apiculteur*, published at Nyon, Switzerland, Mons. Bertrand, writes us as follows:

> I have sown at Nyon, on some land I purchased, 2½ acres of Bokhara clover seed, and nearly as much at my Mountain Apiary; so you see that I am following your advice in the editorial articles in the BEE JOURNAL. We could not do without your able JOURNAL, and this is the universal opinion.

We are sorry to learn that our friend and co-laborer has been unwell from excessive labor and cares, and hope he may speedily be restored to his accustomed vigor and health.

☞ We have received the initial copy of the *New England Apiarian*, published by W. W. Merrill, Mechanic Falls, Maine. In it we are assured that the publisher "is in no way connected with a former short-lived journal published in that place." Had this announcement not been made, it would generally have been considered but a revival of that paper which a year ago issued one number, but never succeeded in publishing another. As several of the Maine bee-keepers seem to be giving it their influence, we hope it may succeed. It seems to have progressive ideas, and the BEE JOURNAL wishes it prosperity, and extends its ☞ of welcome to the infant.

☞ The January number of the *Kansas Bee-Keeper* is on our desk, in an enlarged form. The "Question Department" is in charge of Mr. James Heddon, of Michigan, and Dr. Howard, of Texas, has become assistant editor.

How Birds are Deceived.—The woodpeckers in Norway bore into telegraph posts, being misled by the humming sound, to the belief that there are insects in the wood. The bears sometimes scratch away the heaps of stones put to support the pole, thinking that the noise proceeds from a nest of bees.

☞ May we ask you, dear reader, to speak a good word for the BEE JOURNAL to neighbors who keep bees, and send on *at least one new* subscription with your own? Our premium, "Bees and Honey," in cloth, for one *new* subscriber to the Weekly, or two for the Monthly, besides your own subscription to either edition, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

CORRESPONDENCE

For the American Bee Journal.

Profitable Use of Foundation, or Old Combs, when the Supply is Limited.

G. M. DOOLITTLE.

It often happens that the apiarist wishes to give each swarm, when hived, a start, in the way of frames filled with comb or foundation, but does not have enough of such to give a *hive full* to all the swarms he expects will issue, hence he wishes to give four or five frames to each, or near that amount. To this end he places his four or five frames of comb in the center of the hive, and fills out each side with empty frames, and places his swarms upon them.

As the queen has plenty of room to lay in these combs without the bees building more, she goes to work depositing eggs. As honey is coming in at the time, the bees must have a place to store it, so they fill the empty frames with stores, which are always of the drone size of cells, the same as they would build if hived in an empty hive with an old unprolific queen. Hence, the apiarist becomes disgusted with the use of old combs, and declares that they are of no use to swarms, as a colony not helped at all will accomplish more than does the swarm he has tried to help.

This was about the decision I came to, when first trying to use a limited number of combs for a swarm. Therefore, I decided to use a hive full of comb, or none at all. I soon found that these swarms hived on full sets of combs, so far surpassed those not helped at all, that I wished for a way to help all alike, if possible. I had also noted that by the use of the division board I could generally get from four to five frames filled with nice straight worker comb, after which I would get more or less drone comb built by a swarm having no help at all by way of frames of comb.

I studied on this matter during the winter, and the result was that the next season found me placing ten frames, each having a nice starter of worker comb along the top bar, in each hive; I placed a division board in the center, thus leaving five frames on each side. This division board did not come quite to the bottom of the hive, but allowed room for the bees to pass under it, as they desired. Into these hives I placed my swarms, and in whichever side the queen chanced to go, there the bees commenced work. As fast as the bees could build comb it was filled with eggs, hence, nothing but worker comb was built.

After the swarm had been hived 48 hours, I put on the boxes or sections, which were immediately taken possession of, thus securing the five frames filled entirely of worker comb; for if any drone comb was built, it was in the sections. As soon as these five frames were filled (which was readily ascertained by the bees commencing work in the vacant side of the hive), the frames in the vacant side of the hive were taken out and the division board moved to side of hive.

I next spread these combs apart, and put in each alternate space a frame of comb, thus securing a full hive of nice, straight worker comb. As I used only nine frames to the hive, this gave the swarm four empty combs.

I thus secured two objects, a hive full of all worker comb, and the bees taking possession of the sections in the shortest possible time. I have been so well pleased with it, that I have used it for years, and find it works equally well in using comb foundation where the apiarist does not feel able to buy enough to have a full hive of it for each swarm.

Borodino, N. Y.

For the American Bee Journal.

Central Kansas Convention.

On Thursday, Jan. 11, 1883, some of the bee-keepers of Kansas, met at Manhattan, to form an Association. Many were prevented from attending on account of the severe cold weather. Mr. Marlatt was called upon to preside; and on motion, the following persons were appointed a committee on permanent organization, with instructions to report at 2 p. m. on Saturday, Jan. 20, 1883, viz.: R. Corbett, Ed. Kimball and M. D. Waters.

On Saturday, Jan. 20, another meeting was held, and the report of the committee was made by its secretary, M. D. Waters, who presented a Constitution and By-Laws of the Central Kansas Bee-Keepers' Association, which was, on motion, adopted.

An election of officers for the ensuing year was then held, with the following result:

President, D. B. Himes.
Vice-President, E. Kimball.
Secretary, Thomas Bassler.
Treasurer, R. Corbett.

After some interesting discussions on several points of progressive bee-culture, the Association adjourned to meet at the call of the secretary.

THOMAS BASSLER, *Sec.*

For the American Bee Journal.

Chaff Hives and Upward Ventilation.

T. C. DAVIS.

It gave me much pleasure to see an article from the pen of Mr. Doolittle, on page 52 of the BEE JOURNAL, on this subject, because I am fully convinced that our safe wintering problem is to be solved by the chaff hive and its proper ventilation.

In the winter of 1880 and 1881, I had five of the A. I. Root chaff hives, and five others, of my own make, of the same size as the Simplicity, with fixed bottoms, and the ends double, with 3 inches of space filled with chaff. They had also double stories, put on the same as the Simplicity.

From the 20th of June until the first week in October of 1880, I was in Europe, and had no one to feed the bees during the dry spell we had in the early fall, so when they were examined in October, I found them rather weak and deficient in young bees. I had nothing to do but to pack them for winter, the best way I could, on their summer stands, in those hives. They were all put on four frames, in the middle of the hives, and the sides filled with division boards and chaff. Passages were made in all the combs, and passage ways were provided between the frames and the coverings, by laying small sticks across the frames. The coverings were made of an old ingrain carpet, that was once a good and thick one. Above that there were six inches of loose oat chaff, and a good chaff cushion, so that the upper stories were nearly full with chaff.

Four of those in the Root chaff-hives, wintered excellently, and came out, in the spring, strong and healthy without any help, except about a pound of candy made of sugar and flour, that was laid on the frames about the middle of March. In the other Root hive, they dwindled badly. They were uneasy and flew out continually, when the weather was not intensely cold, and died on the snow. It puzzled me greatly to know why this colony acted so different to the rest. I thought they were all packed exactly the same, and the entrances of all were closed the same, to about four inches.

After many fruitless examinations, I noticed that the carpet on this one, was not exactly the same as on the others. The other four were cut exactly the size of the hives, and they had raveled some at the ends. After putting them close to the front parts of the hives, they were rather short at the other ends, but not short enough to let the chaff fall in. The carpet on this one was an inch longer than the hive, and both ends were closed tight. When I found this difference, the carpet was turned back about ¼ of an inch, and a little straw laid on the opening under the chaff. From that moment the bees became more easy, and did not fly out as before. They came out all right, but I had to put them on two frames and helped them with some brood from other hives.

When the other five hives were examined, I found the carpets packed close, the same as the last mentioned, and a considerable dampness in the hives. I turned these carpets back, also, and filled up as before. The entrances of these were not more than an inch, and they were enlarged to 4 inches at once. They showed some signs of dysentery, and they dwindled some, but after this, the hives dried out some, and all came out strong and in good condition by the end of May.

During the winter of 1881-82 I had 15 of Root's chaff hives, and 3 of the others, packed in the same way, with the carpets turned back about ¼ of an inch at the back part, and the entrances of all the chaff hives left wide open. They all came out in splendid condition.

This winter, I have the 15 chaff hives, and 2 of the others, on their summer stands, packed exactly in the same way, except that they are all on 5 frames, on account of their being very strong last fall. They are doing well so far, and there is not a particle of frost inside the entrances of any of them, in spite of the "cold snaps" we are having. I have also 8 others in a small, dark and well-ventilated cellar, doing well so far.

I never tried coverings of porous cloth over them, and it seems to me that Mr. Doolittle's experience speaks against it. But I believe that my experience with a warm quilt, or a carpet over them, proves that no upper ventilation will not do. It may be all right as long as the weather keeps really cold; but in my neighborhood, where we have sudden changes, and spells of moderate weather, in the coldest winters, it will not do. I do not know but ⅛ of an inch of an opening to the chaff at the back end of the hive, would be sufficient, but I am confident ¼ of an inch is plenty.

In this locality, bad honey in the fall, and pollen in the hives, does not trouble me in the least, and if I have all the Root chaff hives I need, and have my bees packed as I said, I have no fear of loss. The difference I find between the Root chaff hive and those I make myself for wintering, is, mine are more apt to get damp in the bottom, when the others are always dry, and that of course is greatly in their favor. There may be other hives quite as well as they are, but I have not seen them yet.

Pittsburgh, Pa., Jan. 26, 1883.

For the American Bee Journal.

Lorain Co., O., Convention.

The bee-keepers of Lorain County, Ohio, met in the Probate Court Room of the Court House at Elyria, Dec. 20, at 10 a. m. and organized a society under the name of The Lorain Co. Bee-Keepers' Association.

A constitution was adopted, similar to one in general use by other societies of the kind, with the following officers: President, Joseph Hudson; Vice President, C. D. Bennett; Secretary, O. J. Terrell; Treasurer, M. R. Bennett.

T. C. Crilly and C. D. Bennett were appointed a committee on statistics.

Adjourned till 1:30 p. m.

President Hudson called the meeting to order at 1:30 p. m.

Mr. Jump was called for but did not respond.

O. J. Terrell, being called for, made a few remarks in favor of organized work; he also spoke of the manner in which his bees were packed for the winter, namely, in clamps, with clover haff; also, that he would rather have our inches of clover chaff than ten nches of any other packing he could think of.

B. F. Worcester described a bee-house which he built, years ago, at the East, which wintered bees successfully, although the winters were very severe. It was made with very tight single walls, with ground floor, and ventilation at top and bottom. He considered the ventilation a very essential thing.

Mr. Tompkins said he weighed his bees in the fall and again in the spring, and the average loss per colony was about 7 pounds. One small nucleus, fed 20 pounds of granulated sugar-syrup, had gained 5 pounds.

The merits and demerits of the chaff hive were quite thoroughly discussed, the majority being in favor of the chaff hives.

The committee on statistics submitted the following table:

Apiaries.	No. of Colonies in Spring.	No. of Colonies in Fall.	Comb Honey, pounds.	Extracted H pounds.
1	60	75	1,500	....
2	20	26	425	....
3	69	100	3,450	....
4	11	25	400	....
5	20	30	400	....
6	12	18	300	....
7	5	13	400	....
8	13	19	240	....
9	7	12	300	....
10	11	15	200	600
11	21	47	500	....
12	60	73	2,000	1,000
13	15	22	225	325
14	3	8	250	....
15	1	2	....	....
16	5	10	180	....
17	14	24	568	220
18	5	11	....	165
19	6	9	....	250
20	9	14	400	....
21	1	3	....	....
22	1	3	50	....
23	7	14	120	....
24	2	2	50	....
25	1	3	45	....
26	4	6	50	300
27	100	125	4,000	....
28	7	11	60	....
29	13	18	822	250
30	6	11	154	....
31	20	20	500	....
32	5	13	....	800
33	5	15	200	....
34	1	2	....	....
35	8	8	75	....
36	13	7	278	....
37	79	75	3,300	200
38	2	6	140	....
39	4	4	90	....
40	22	49	112	1,400
	668	948	21,784	5,510

The question being asked whether it would pay to plant for honey alone, Mr. W. C. Sutliff replied that it would not, but there were plenty of crops that would yield both honey and good hay. He preferred alsike clover to anything he had tried.

L. L. Sears claimed something good for mignonette. It lasted till cold weather and was a wonderful plant to secrete honey.

J. E. Squires said, in speaking of the different races of bees, that he did not want anything to do with the Cyprians. Had had one large colony, and they were so cross that he gave the queen away, and divided the colony into four small nuclei, giving them Italian queens, which he claims are good enough for him.

The question was asked by a member, if it paid to keep bees? This brought forth a lively discussion, and it was thoroughly proved by several that bees, rightly managed, did pay.

Some effort was made to establish uniform prices for honey, but this was a vexatious question and will be more thoroughly discussed at the next meeting.

Mr. Geo. H. Purple exhibited a novel machine, which he makes use of, in taking a swarm of bees from a tree. The machine is so arranged that he can hang in it a frame of brood comb, so that the bees readily take to it.

The Association passed a resolution of thanks to the Probate Judge, for the use of his court room, and also to the county papers, which so kindly inserted the notice of the meeting in their columns the previous week.

On motion of B. F. Worcester, the meeting adjourned to the second Tuesday in March, 1883.

O. J. Terrell, *Sec*

For the American Bee Journal.

Wintering Bees in the South.

FRANK THIAVILLE.

Wintering bees in the South is no trouble, if the bees are in proper condition, with plenty of bees and honey. A populous colony that has 25 pounds of honey on the 1st of November, will winter well on the summer stand, and be ready for the honey season when it comes.

An ordinary colony may winter well with 8 pounds of honey, provided the honey season opens early, say by March 1; but if the spring is cool and backward, they will perish, unless fed. During the period of repose, bees consume an average of 2 pounds of honey per month; but when breeding time comes, they require at first 2 pounds, then 3 and 4 pounds per week, according to the strength of the colony, and the quantity of brood that is being reared.

A critical time for our bees is when the honey season opens early, and is cut off, by frost and cool weather; our hives being then full of bees and brood, they must have honey, or the barrel of sugar must be ready.

Colonies well supplied with honey will remain quiet at home, and there is no spring dwindling; but, if they have not honey enough, they will fly out during the cool days, get chilled and perish, and the colony will dwindle, and even, if it can pull through, it is worthless for the season.

In the winter of 1880-81, no bees perished on the summer stands, so long as they had honey; but the spring was cool and backward, and a great many perished by the last of March, and first part of April, just at the eve of the honey season.

We are located between 34° and 35° north latitude. In the winter of 1880-81, the thermometer seldom went down to zero; it was several times at 3° and 5° above at daybreak, but at noon it had raised to 29°. It was, for several weeks, at 10° and 12° above at daybreak, and 30° and 40° at noon; and about every week or ten days the bees had a flight.

Last winter, the thermometer did not sink much below 25° above zero at night, and at noon 60° to 75°.

Last Sunday, Jan. 21, was the coldest of the season; at daybreak it was at 9° above zero; and at noon 30°. Yesterday it was moderating; at daybreak 16°; and at noon 45°. To-day is pleasant, and bees fly if they want to.

In cool, hard winters I put my bees into a bee-house, or pack them with leaves and straw, for about 6 weeks, from Dec. 10 to the middle or last of January, and it saves honey. There is very little breeding at this date. This is an indication that we will have a late spring.

Forest City, Ark., Jan. 23, 1883.

* * *

For the American Bee Journal.

How to Market Honey.

G. W. DEMAREE.

Mr. James Heddon "publicly invites" me to write an article on the above subject. Of course he does not expect to be benefited by it himself, because he has already "got there." It is presumable, however, that he wishes to "prove me" as to whether I know anything about practical matters pertaining to bee culture. I write, then, in the hope of benefiting those who have had trouble to establish a market for their honey. I believe that there are many such, judging from the private inquiries I have received in the past.

Before I take up the subject, however, I wish to say that the article of Mr. Heddon, which contains the invitation before mentioned, though purporting to be a "clear" statement of his "position," shows "confusion worse confounded." His "second" proposition which, in fact, is the text of his discourse, is replete with error, and is marvelously superficial, when viewed from a historical and scientific standpoint. Of our native bees, uncontaminated with the blood of other races, I have noticed at least four varieties. While, of the Italian, the variety is "legion," hence, to confine the "long" or "shorter-bodied" specimens of the Italian to any imaginary variety of the race, is not only an error, but is an egregious blunder. The truth is, the long, slender-bodied specimens of the Italian race are superior to the short, thick-bodied specimens, no matter whether they are "dark" or "light." As far as my observation extends, the length of the body is in no way influenced by the color.

Mr. H. has not attempted to controvert a single important proposition that I have laid down, except in the way of *argumentum ad crumenam*—argument to the purse, "bread and butter." Is life a great "tread wheel," with its perpetual creaking under an unceasing tread? Even though the inevitable trough be filled with bread and butter, such a life is the meanest bondage that ever bowed the neck of man. If all of us should write on "bread and butter," who would be left to do the scientific thinking and writing?

In the "long ago" I kept some bees to supply our table with honey; and, even then, when I knew but little about bees, I loved to watch them as they bore their precious loads of nectar to their home—"sweet home." After the modern system of bee-keeping became a reality, I purchased some Italian bees and began to study their habits and natural history. Time went on, and my bees multiplied under good management, and soon we had honey for our own use and plenty to spare, and of this, I would send around to our neighbors, each a nice package, every once in a while. When a person wanted a "bucket" of honey I sold it to him.

I bought an extractor and produced both comb and extracted honey. I felt some anxiety to introduce the extracted article, but the chances looked bad at the start. My customers, when they came for honey, would say, "I want honey just like that I got from you last." I would show them the one-and-a-half-pound sections, and show them the article of extracted, and explain it all to them. It was all "wonderful and nice," but they must have it just like that they got from me before. Very well, then, I would say, just leave your buckets here and I will fill them in a few days. To fill these orders my nice section honey was cut out and the buckets were filled without bruising the combs more than could be avoided, and then the very best quality of extracted honey was poured into the buckets till every nook and corner was full. Put up in this way, a three gallon bucket will hold 35 pounds of our best white clover honey. These packages gave perfect satisfaction, and when these customers returned for more honey, they were pressing in their requests that the honey must be just like what they had been getting from me.

On one occasion, a good customer sent in 4 three-gallon buckets, and ordered them filled with honey "like he had been getting from me." At a venture, I filled 3 of them in the usual way, and the other I filled with the very best article of extracted white clover, so thick that it would nearly "stand alone." Being a pleasant fellow to deal with, he said nothing and paid the bill—20 odd dollars. The next season, his buckets came back with an order for 1 or 2 hundred pounds of honey like "that one bucket that had no wax in it." He had "put that bucket full aside till winter, and it was simply splendid, there were no pieces of hard wax to get into his teeth;" others were induced to try it, and it "took" every time.

Well, by and by, my little honey house became stored with more honey than my good little home market demanded, and I began to look out for a city market. I put some samples of nice section in the "show case," in a fancy grocery, in Shelbyville, and they stood there several weeks. They were "very nice," but nobody seemed to think that honey, in that shape, was made to eat. I then corresponded with a firm in Louisville, proposing to send them some sample crates of sections; also some extracted honey; explaining the whole thing to them, and setting a price on the honey, warranting the honey to be just as I described it, or they might return it, at my expense. They wrote me to send it on, and I sent them one crate of 32 sections and 2 sixty-pound kegs of extracted honey. In a few days I received a check for the price of the honey, and an order for more. I now had an outlet for all the crop that was not taken by the home market.

It is unnecessary to pursue the subject further, all large things have small beginnings. It takes skill and patience to create a demand for honey, in any locality, where the business is new, but when once the trade is established, it is as easy to sell honey as any other product for consumption. I insist that our local markets should be cultivated to the fullest extent, for we thereby lessen the competition in the city markets. The subject, pertaining to the "size of the packages," is interesting; but to create a demand for honey as daily food in the stead of the vile table syrups on the markets, is a matter of more interest.

Christiansburg, Ky.

* * *

Nebraska State Convention.

The Nebraska State Bee-Keepers' Association met at the Court House in Wahoo, and was called to order by T. L. VonDorn, President, on Jan. 11, 1883. Quite a large number of the members from various portions of the State were present.

Secretary Hawley read his annual report, which on motion was recived and placed on file. The treasurer, F. F. Caldwell, made his annual report, which on motion was referred to a committee on finance, consisting of Messrs. Trester, Rose and Jordan.

The bill of the Allen Printing Co., of Omaha, for 250 copies of the By-laws of the Association, amounting to $7.50, was allowed, and an order drawn on the treasurer for the amount.

Quite a number joined the Association, and members paid their dues.

The election of officers was postponed until 9 a. m. to-morrow.

On motion, the president was instructed to appoint a committee of one on statistics, and M. L. Trester, of Lincoln, was appointed as such committee.

Mr. Corbett, of Plattsmouth, called for a report from persons who had cultivated forage for bees. This led to a spirited and lively discussion regarding the successful growing of clovers and tame grasses in Nebraska, which was of great interest to farmers and stock raisers, as well as apiarists.

Mr. Stark, of Beatrice, said: I have sowed about 40 acres of red clover and it is doing well, and I have a good pasture. I plowed the ground, harrowed it until well pulverized, then sowed the seed and rolled it. It blooms well and the bees work on it well. I pasture the field with cattle, and do not think there is any question but what clover can be grown successfully in Nebraska. I also sowed two acres of sweet clover, six pounds to the acre; seed cost 30 cents per pound.

Mr. Muir, of Brownsville, said: I have been in Nebraska since 1856, and my experience and observation lead me to conclude that the new soil of Nebraska will not produce good clover and tame grasses, but that as it becomes cultivated, and is cropped for several years, it will produce good tame grasses. As the soil becomes cultivated, it becomes more solid, the clover does not so easily winter-kill, and grows more thrifty; I consider white clover the best forage for bees.

Mr. Fletcher, of Wahoo, said he thought there was no doubt about raising clover in this State. He sowed 10 pounds of seed, two years ago, and now had 20 acres of good clover. He pastured the field, and thought that was the best way to insure a growth.

Dr. McAllister, of Columbus, said: A few years ago, white clover was sown in a few of the lots of that city, and was now spreading all over the streets and adjoining lots. He considered sweet clover the best honey-producing plant.

Mr. Myers, of Bellevue, said: Two years ago I sowed 20 pounds of clover seed on prairie sod, and on the north slope of a hill, the soil was new and had never been cultivated, and I have had a good field of clover there ever since; I think white clover would grow anywhere, if hogs were kept out of it.

Mr. Trester said: I have sown tame grasses and clover in Nebraska every year since 1862, and have never failed of getting a good crop but once, and then it was poor seed. My plan is to harrow the ground down smooth, then sow three or four kinds of tame grass seed mixed, and in about double the quantity that is recommended by the seed men. Then I harrow it thoroughly, and, when the first crop is ripe, I mow it and leave it upon the ground, and I have no trouble in getting the ground matted with clover by the second year. I have sown on sod and on cultivated land, and, I have no doubt but what tame grasses of all kinds can be successfully grown in this State.

Mr. Rouse, of Wahoo, said: Three years ago there was a pasture lot near my residence seeded to red clover, and, in a little, white clover appeared with it, and now it had nearly run the red out. I think all that is needed, to get forage for our bees, is to scatter white clover seed. I find that it even spreads on the prairie, where it has not ever been broken. I think that white clover always secretes honey in moist seasons, but in dry seasons does not.

G. M. Hawley said: I sowed white clover, seven years ago, and it winter-killed. Some has since been sown in the cemetery lot, which is growing and spreading; I think that, as the country becomes older and more cultivated, tame grasses will do better.

Mr. Corbett, of Plattsmouth, said: I am glad to see the turn this question has taken. I think clover will grow well in Nebraska. I have always had success, even when sown on the open prairie, without any preparation whatever; I have watched it in dry seasons, and do not see that it kills out. I think white clover does best when not shaded, and if it does kill out, some winters, it will return again. I think it secretes honey only in moist seasons.

It was nearly the unanimous decision that tame grasses of all kinds would grow well in this State, and that they were profitable crops to grow, and that white and sweet clover were excellent forage plants for bees, and could be easily grown. After the the close of this discussion, the Convention adjourned until 7 p. m.

The Convention was called to order by the president at 7:15 p. m. Quite a large audience of the citizens of Wahoo were present, besides the members of the Association.

Mr. T. L. Whitbeck, a member of the Saunders County Bee-Keepers' Association, made a very terse and well-timed speech of encouragement to the Convention, and the Hon. M. B. Reese, on behalf of the citizens of Wahoo and the commissioners of Saunders county, extended to the Convention a hearty welcome. Both speeches were responded to in a happy manner by the president, after which the Convention was favored with some excellent instrumental and vocal music by Miss Stocking, of Wahoo.

The question box furnished the following questions, which were discussed at length:

How far will bees go to pasturage? Various members gave it as their experience that they would go from three to seven miles, but all that was over two miles was lost labor.

How much honey will one bee gather in a life time? A bee lives but forty days, and it is estimated that one bee will gather a teaspoonful of honey during that time. Their average load is from 1⅛ to 3 grains.

Is it necessary to handle queen-cells carefully? It is. They should be handled very carefully, and always kept in their original position, head down.

Why do bees of queenless hives kill their young queens? Several reasons were given by bee-keepers, but it was thought that it was only a rare occurrence that they did so.

Will Alsike clover always produce honey? Mr. Rouse said that it did not, the first year of its bloom; but Mr. Hawley and Mr. Corbett thought that it did, and they had seen their bees working on it.

When bees are wintered in a cellar, is light an injury? Mr. Hawley did not think it was, if the cellar was kept at the right temperature, which, in his opinion, was 45 degrees; but he preferred a dark cellar, because the bees kept more quiet and did not consume so much honey as in a light one. Mr. Baird and Dr. McAllister had secured the best results in dark cellars. Mr. Turney, of Ceresco, wintered his bees in a light cellar, with screen over the portico of the hive, and always with success; he preferred a light cellar. Mr. Stark thought the darker the cellar and the more quiet they were kept, the better. Mr. Whitbeck had wintered bees in cellars, for 15 years, in Wisconsin; he kept the cellar dark, but well ventilated. At 20 degrees the bees consumed more honey, but it was less work to take care of them; at 30 and 40 degrees it was more work, but they consumed less honey. The general sentiment of the Convention was in favor of wintering in dark cellars, if cellar wintering was the method adopted.

With what and how would you feed a colony of bees that have no honey? To feed with candy was decided the best.

A few moments of conversation was held, when the Convention adjourned until Friday morning, at 9 o'clock.

Convention was called to order at 9 a. m. by the president, when the following were elected officers for the ensuing year: President, T. L. VonDorn, Omaha; Vice-President, S. L. Thomas, Plattsmouth; Secretary, M. L. Trester, Lincoln; Treasurer, F. E. Caldwell, Bellevue; Finance Committee, C. L. Speice, Dr. McAllister and J. N. Heaton, all of Columbus.

The report of the finance committee on the treasurer's report was read and adopted.

A communication from the Hon. D. H. Wheeler, President of the State Agricultural Society, was read, and in compliance with a request therein, T. L. Von Dorn and D. H. Wheeler were appointed a committee to meet with the State Agricultural Society at Lincoln, to make arrangements for exhibits and premiums on honey at the next State Fair.

It was decided that it was not best to accept the invitation extended to hold the annual meeting of the Association with the annual meeting of the State Agricultural Society.

On the question of holding the next annual meeting, Lincoln received 12 votes, and Fremont and Nebraska City 8 each. The Executive Committee will decide upon the time and place of holding it. The secretary was instructed to notify all bee-keepers in the State by postal card of the place and date when decided upon, and invite them to attend, also to issue a call for statistics from the bee-keepers of the State, said call to be published in the newspapers of the State; also to notify delinquent members of the amount of arrearage in annual dues.

The president then delivered his annual address, as follows:

PRESIDENT'S ADDRESS.

I am glad to extend to you a kindly greeting. Another year, with its cares and labors, its joys and sorrows, its attainments and its failures, has passed, and been added to that long procession of the departed ages. We have again assembled to counsel together, to exchange experiences and thoughts, to lay plans for future action. We have a common interest, an interest in each and every one of our co-laborers, an interest in keeping up apiculture to the highest standard. Let us, therefore, be prompt to advise, ready in council to advance our cherished pursuit.

There are but few things to which I shall call your especial attention this session, and these I hope will receive your careful consideration.

Owing to a season, exceptionally good, during the last half, in most of the Western States, a large surplus has been gathered, and large quantities have been thrown on the market by persons desirous of realizing at the earliest date. In consequence, prices have fallen, until they are less than the situation warrants, especially for comb honey. Added to this, there have been frequent shipments of inferior honey, and honey dew, which the shipper unable to sell at home, sends abroad to be sold at any price. This has still further demoralized trade and disgusted consumers.

With a view to freeing our markets from undue pressure, I have corresponded with several of the large dealers of this country, and also sent samples to England. The replies are here for your information. In this connection I feel warranted in saying, that if each producer would bring or send average samples of his honey to our State Fair for exhibit, that much might be done to market at that place.

I believe that a conference with the State Board of Agriculture would be of benefit to the producers and State at large. An agent for the sale of honey, in one or more of our largest towns, to retailers or jobbers, would also, in my opinion, benefit us all, in as much as one person could, by prudent measures, obtain fairer prices than a number making promiscuous sales, as is the practice now.

Next to injudicious sales, no one thing operates so much against the sale of good honey as the glucose traffic. This vile stuff, allowed by law to destroy health and sound business principles, is in one form or another upon the tables of the majority of American families. Never sold under its own name to the consumer, and ignorant of its effect upon health, its consumption is enormous. There is plenty of unimpeachable testimony, proving its total unfitness as an article of food, and I think we should leave no stone unturned to expose its true character.

I believe much can be done by our Association to place the facts before the people. But that which would deal it the deadliest blow, would be plenty of cheap wholesome honey. I am satisfied we can afford to sell our extracted honey at 10 cents per pound, and at that price it is within the reach, owing to its vastly superior flavor and sweetening qualities, of even the common laboring man. We can render no greater service to our State than to place a wholesome sweet within the reach of all its citizens.

While the exhibit at the last Fair was an improvement over all former ones, I am sorry to say it was by no means commensurate with our present status in apiculture. I am aware that to make an exhibit, necessitates an expenditure of both time and money, yet after attending three consecutive fairs, must unhesitatingly pronounce it a paying investment for any bee-keeper who produces for sale, even for a home market. Some practical measures, looking to a more general exhibit, would be very desirable. I believe the State Board of Agriculture will do all in its power to make our exhibit a success. They certainly merit our most sincere thanks for what they have already done.

With this communication, the second term of my office as presiding officer closes. Allow me to thank you, each and every one, for the very many kind words, wishes and deeds, you have bestowed upon me. Let me assure you that I thoroughly appreciate you all, and in the years to come the remembrances of these days will always be those of sincere and unalloyed pleasure. T. L. VONDORN.

Louis Trester, a youth of about 14 years of age, read the following report of juvenile bee-keeping:

Mr. President, Ladies and Gentlemen: My Pa told me if I would write my experience in bee-keeping during the past summer, I might go to the bee-keepers' meeting—so here it is: Sometime in June (about the middle, I think it was), I bargained with Pa for four frames covered with bees and filled with brood, for which I was to pay $1.00 apiece. When I went to get them, Pa said I might take one frame with a queen-cell on, as he had several of them. I took three frames, one with a queen-cell on, and left the fourth one, thinking, perhaps something might possibly happen to my cell or queen after she hatched, and I might want another. I took the three frames and put them in a hive and closed them in as small a space as possible, by means of a division-board. All went well, notwithstanding I took a peep into the hive every day to see that nothing happened the all-important object of the hive. In due time the cell was opened and a beautiful, yellow queen came forth, but my anxiety was not over yet, I still kept peeping into the hive nearly every day, to see if my treasure, as I deemed it, was still there. About the fourth or fifth day, I looked in my hive one evening, and could not find my queen. It was late, about sundown, and I thought such a young bird as she ought to be at home. I waited until dark and then closed the front of the hive, so she would not get out earlier than I, and, in the morning, when I looked, I found her ladyship as composed as if she had always been laying, and then I got my fourth frame and commenced to build up, by adding one sheet of comb foundation at a time, putting it in the middle of the brood chamber. When honey season began I had as strong a colony of bees as my Pa had in his apiary. I bought the top story containing boxes, which cost me $1.00, making a total cost of $6.35 for bees, hive, foundation, section boxes, and all complete. When I put on the second story the bees seemed to have no inclination to work in the boxes, so I put two frames with section boxes down in the brood chamber, and put four brood frames in the place the others occupied, and left them there about a week, and found that they were working in boxes both above and below; then changed all to their proper places, and then they worked readily, but after all my luck, and being a beginner in the bargain, I took from my four frames of bees, that I began with in the spring, 47 pounds of comb honey, and 53 pounds of extracted honey, leaving about 40 pounds to winter on. I sold my honey for $15 cash, leaving me a gain of $8.65 on $6.35 invested.

Remember, that I still have my bees, they are yet alive. Count them at what you please, if they come through all right, in the spring, my profits will be at least double, for I have not counted my bees at all in my report.

LOUIS TRESTER.

M. L. Trester read a paper on "Single-walled *vs.* Double-walled hives," which contained much for interesting thought by apiarists.

Adjourned until 2 p. m.

The meeting was called to order at 2 p. m. The president read some correspondence from abroad in regard to marketing and shipping of honey.

Shall we use separators? Not, for narrow sections.

Is it more profitable to run for comb or extracted honey? Extracted.

Will chaff hives pay? A difference of opinion.

Will basswood groves grow here? Yes.

Will the Rocky Mountain bee plant grow here? It will.

Resolutions were adopted thanking the citizens of Wahoo, and the railroads for courtesies, and then the Convention adjourned.

For the American Bee Journal.

Feeders and Wired Foundation.

JAMES HEDDON.

In response to Mr. Williams' inquiry regarding my feeders, and several private inquiries in relation to wired foundation, allow me to append the following: To describe the mechanical construction of my feeders, would be simply to make confusion worse confounded. Whoever has faith in it being the best shape and style of make-up, to embrace the vital points most desirable for a bee-feeder, and who may wish to make some like it, should by all means make from a sample. Just so with any article of merchandise in the bee-keepers' line. When you get a sample, do not be too fast to make "just a little alteration," because you think such change an improvement, or may not have just the right stock to work from, and "guess it will make no difference." Recollect, that while no one claims perfection, and that you might improve any apicultural article of merchandise, you will hardly, in a single day, get ahead of one who has pondered long over, and experimented for years, perhaps, with it.

Let me illustrate. My style of hive

and surplus case is, perhaps, as simple as any form now in use. It requires more thought to reduce complication to simplicity, than *vice versa*. Several farmers about here have taken samples of my hive and lumber to the shop where I hire my lumber cut, and by the samples hired theirs gotten out in the flat, then taken home and made up. By and by, I was solicited to go and make a bid on their bees, as they were positively "going out of the business." (They were never in it much.) I was glad to buy bees "in hives just like mine." I did buy them, and I, in every case, threw away the hives. In one case, the frames also had to go. I could not use anything about the botched-up concern. One man came 30 or 40 miles and left a sample and an order for 40 hives, all to be made up by the firm who does my cutting. Happening in, one day, and seeing them all up and painted, I removed the cover, and found that the owner had left orders so to do, and they had made all of them 2 inches deeper than the frames. That bee-keeper had a bottom air chamber theory, while the real practical air chamber was "on top," just under his hat. Well, the stock boards used were hardly wide enough, so, to make sure and have this new "air chamber" fully large enough, (so that the bees could build waste comb in it) the mill men stole ⅛ inch (only ⅛, that is not much) from the space above the frames. This reduced that space to less than bee height, and a yoke of oxen would be needed to pull off a cover, by and by. The owner was reported afterwards, when using these hives, to call on a name "more frequent than some would advise."

Please excuse me from the futile attempt to give a description of my feeders sufficiently clear to enable one to make them accurately by it. The Patent Office experts demand comprehensive drawings or models. In the first place, he who makes only a dozen or two, makes them at a greater cost than to buy them. He who wishes to make many, for sale or otherwise, should, and can well afford to pay five prices for a sample, and then make them just like that sample. My feeder does, and I think all feeders should, embrace the following principles: It never leaks. It never daubs a bee. No robbing is caused by its use. No heat is lost. No coming in contact with the bees when refilling, or ascertaining the progress of the bees, or emptying it. It can be used equally well at the entrance, but with a feeder properly made and adjusted, "top feeding" is much to be preferred. It holds about 2 pounds, and works very well for feeding full stores for wintering. When so doing I used 4 of them (which just covered my 8 frames, Langstroth hives), and 2 fillings (16 lbs.) I find ample to last from Oct. 1st to May 1st. I feed this amount in from 24 to 48 hours. The bottom of the feeder is a solid block, 2½x5x12¼, with saw cuts ¼ inch, cut into it, to hold the feed. The bees come up through one that is cut clear through, round over a lower partition, and fill up and retire below. These cuts are divided by thin partitions (that prevent daubing of the bees), and they are all connected by 3 holes crosswise at the bottom, so that as fast as you fill one space, all must fill. The whole is covered with a wire cloth, frame and board cover over all; and is well painted on the outside. Basswood is the best to make them of. As a bee-feeder for general use, they are good. As a supply, they are hardly worth bothering with. If feeding ever becomes a wholesale practice, something on the same principle of four times the size, will be used, I think. There is no patent on them.

All fears of damage to brood by fine tinned wire running through the base of the foundation, are now at an end. The use of such wire holds the full sheets in perfect position, while being drawn to perfect combs. The Given is our choice of all comb foundation. To make full sheets right, in previously wired frames, the press is a gem. A thing $500 would not tempt me to be without. An excellent article of brood foundation can be made with No. 36 tinned wire incorporated in it, vertically, every 2 inches, with the ends sticking out so that they can be put through holes, in, or on hooks previously attached to the frame, and all in apple pie order. But I think the better way is for each bee-keeper who has too few bees to own a press, to bore and wire his frames with No. 30 (coarser) tinned wire, and fasten the sheets of any unwired foundation to these wires, by the button hook process, which I may hereafter more fully describe. We have found the Given to be the best style of foundation for this hand-pressing on to wires; also the best utilized by the bees.

Our bees flew some yesterday, and just a wee bit to-day, and the prospects now are good for this time of the year; for the sun, the glory of earth, is now "returning on his silver wheels." He is coming to us again, with the old certainty; and whose eyes will he gladden more than those of the bee-keeper. We know he will raise the mist, cause the rain, grow and paint the nectar-laden flowers. His genial rays will not only warm our bodies but our minds. In the language of Southey,

> I marvel not, O Sun! that unto thee
> In adoration, man should bow the knee,
> And pour the prayer of mingled awe and love;
> For like a God thou art, and on thy way
> Of glory, sheddest with benignant ray,
> Beauty, and life, and joyance from above.

Dowagiac, Mich., Jan. 29, 1883.

For the American Bee Journal.

Kentucky State Convention.

Owing to the poor health of ex-Secretary Williamson, which prevented him from attending the last annual meeting of the Kentucky State Bee-Keepers' Association, but a very meager report of the meeting was published in the *Farmers' Home Journal* (and I have never seen that), and was not present at the meeting myself, but I understand that G. W. Demaree, of Christiansburg, was elected President and E. Drane, of Eminence, Secretary; W. Cook, Vice President; J. B. Nall, Treasurer; N. H. Lettell, Mr. Hofstatter and A. Snider, Executive Committee. The meeting stands adjourned to meet in Louisville at a time to be fixed by the executive committee, and not knowing the post office address of the committee, I take this plan to call their attention to the matter, hoping this may meet their eye and that they will take steps immediately to fix the time so that notice may be given in the papers. It is to be hoped that the bee-keepers in Kentucky and those in adjoining States will see to it that we have a rousing meeting. Let all bee-keepers attend, for it is to their interest to do so, and let their light shine; let all novices and beginners attend, that they may learn to make bee-keeping a success.

E. Drane, *Sec.*

Eminence, Ky., Jan. 29, 1883.

For the American Bee Journal.

Do Bees Wound the Blossoms?

REV. M. MAHIN, D. D.

In the American Bee Journal of Jan. 24, 1883, I find an article by W. H. Stewart containing some things that should not be allowed to pass without some criticism and inquiry.

He holds "that bees wound the bloom of clover, buckwheat, linden, and in fact all other plants, before they are able to extract from them the desired sweet." But he does not offer any proof of his faith in this new doctrine. He does not tell us how the bee wounds the clover blossom. I have watched bees by the half hour, at least, gathering honey from clover, and I never yet saw one insert anything in the flower except its tongue; and any one who has ever seen a bee's tongue knows that it cannot wound anything. The idea that bees wound the flowers to get the honey is contrary to all observations of the structures of the flowers, and of the bees, and of the process of gathering the honey.

Mr. Stewart further says: "Mr. H. M. Morris, of Rantoul, Ill., lives where there is more corn than any other honey-yielding plants, and his bees store large quantities of corn honey each year. He finds that bees work very lively at the base of every leaf, and at every joint from top to root of the stalk. The truth is, that the rind of the stalk is the most tender at that point, and the bees mutilate the rind, making the stalk bleed, and then gather the sweet fluid."

I not unfrequently see something in the bee papers and elsewhere about "corn honey." But corn honey is a myth, except so much of it as is made at the glucose factories. People see bees working on corn tassels, and take it for granted that they are gathering honey; but they are not. There is no honey there to gather. I have sometimes watched bees working on all the varieties of corn grown in this country and I never saw a bee apply its tongue to the flower. The corn tassel has no organs for the secretion of nectar, and it is impossible for it to yield honey. Such at least is my firm conviction, and will be, till proof of the contrary is presented.

But the bees mutilate the rinds of corn stalks! Well! well!! If that is so we will have to acknowledge that they can break the skin of a grape, and confess that we are liable to the grape growers for the damage to their crops, which we have claimed was done by birds, wasps, and, more than all, by the weather. But the thing is too absurd to be treated seriously. Surely, Mr. Stewart must be joking. If Mr. Morris ever saw bees sucking at the joints of corn stalks (I never did, and I was raised among corn-fields and bees,) the corn was infested with chinch bugs, or some species of plant lice. In very dry weather I have seen bees among the foxtail grass when the chinch bugs were working on it, but only one season.

Huntington, Ind., Jan. 24, 1883.

SELECTIONS FROM OUR LETTER BOX

Size of Hives and Frames.

How many square inches should there be in the brood chamber? What is the right distance between the frames (in the brood chamber), the frames being ⅞ in. wide? What is the size of sections that will hold 2, 3 and 4 lbs. of honey with separators.

Morven, Ont. W. R. HENWOOD.

[The brood chamber of the hive should be about 2,000 cubic inches, unless a smaller breeding apartment is required for the purpose of driving the bees into the boxes above, when running for comb honey.

The distance between frames, from centre to centre, should be a little less than 1½ inches.

The one-pound section for honey is 4¼x4¼x2; the two-pound section measures 5¼x6¼x2. Larger ones are now entirely out of date.—ED.]

Trial of Packing in Different Ways.

Some of my bees flew a little on Dec. 24th, and I swept the dead bees off of the bottom boards; on some there were more than I desire to see so early in the winter. I hope they will be able to have a cleansing flight before many more weeks. In my two-story hives there are no dead bees. I have 20 hives of bees, packed in different ways, on the summer stands. Those that have the honey above are now in the best condition.

Matteson, Ill. A. WICHERTS.

The Forties Below Zero.

We are having some very cold weather now. The temperature has been very low, continually, since the first week in December, but I shall not venture to tell you just the exact depth that has been reached; suffice it to say that it did go down to the forties below zero; the snow is about 2 feet deep, and somewhat drifted. As the cold dreary days and long evenings of midwinter pass stormily by, would not a bee-keeper have a thought occasionally about the welfare of his stock? I miss the little bees greatly, during the long term of their imprisonment. O how I should like to live in a land of flowers, where the music made by their tiny wings could be heard from the first to the last day of the years, as they come and go—time would glide so sweetly by. JOHN MORRIS.

Mauston, Wis., Jan. 25, 1883.

Rearing of Drones.

I started this spring with 5 good colonies, and increased to 15, by natural swarming. One swarm, coming out on June 17th, gathered 218 lbs. of surplus comb honey; all the others did well. In the BEE JOURNAL for Dec. 20, Mr. Morse speaks of taking frames of honey away and replacing them with frames of foundation. Do you consider that a good practice? What would be the consequences to use all foundation in the brood chamber? Where would they raise drones? Please answer through the JOURNAL.

Toledo, Iowa. H. L. FISHER.

[Mr. Morse mentions the plan of taking frames of honey from the hives, and putting in frames filled with comb foundation in their place. These are readily filled with eggs or honey, as the case may be, and the practice is a good one. The bees will be sure to make drone cells enough on the edges to obtain all they need. This plan is pursued to prevent, as much as possible, the rearing of drones.—ED.]

Home Market for Honey.

As there was an error in my report, I will give it as it should be: I started last spring with 9 colonies, and have increased them to 29 by natural swarming. I have obtained from them 500 pounds of honey in the comb, and also extracted 500 pounds. I realized from 15 to 20 cents per pound for it in my home market. The bees are all packed for the winter in a bee cellar.

F. A. GIBSON.

Racine, Wis., Jan. 25, 1883.

A Sample of Peculiar Honey.

I left with C. H. Lake a small bottle of honey to be forwarded to you to identify, if possible. The sample sent is ¼ clover honey, which does not alter the taste, but I had to add something to darken the shade, before the honey would sell. This honey is, when pure, about as clear as water—the lightest honey in the world, and, to my taste, the best. I took a small sample to the Cincinnati convention, hoping to get some information as to the source from whence derived, and was suspected of putting up "a joke on the convention" with "rock candy syrup." Dr. Miller said, "glycerine and sugar," Mr. Bingham proposed "honey dew," but I have had this same honey at the same time (June) for 3 consecutive years. This honey candies as white as the best lump sugar when extracted, but will not candy at all in the comb. Dysentery has commenced to show itself, but in hives with the lime protection I have failed to discover a trace of the disease. I should be pleased to have you try some experiments with the lime idea this winter (gratis). I do not claim a cure, but a preventive for dysentery, and if it is not what I claim, I want to know it at once, or as soon as possible, as I hope to solve the problem of "wintering on the summer stands" before I give it up. F. DELLA TORRE.

Baltimore, Md.

[The honey is candied solid, as white as cream, and very pleasant to the taste, but we cannot state definitely the source from which it was gathered; the white clover flavor seems to be overpowered, so that but little of its taste can be discovered in it. We shall be glad to publish the experiments of Mr. Della Torre with lime; we are not situated so that we can experiment with it now.—ED.]

Wood Separators,—Thin Boxes.

I have used wood and tin separators during the last 7 years, and now prefer the wood. Would like Mr. Ripley to give us more on the size of honey-box and also any others that wish, until we get a size that suits *merchants*, *consumers* and the *bees*. What *thickness* is best for the box? If boxes are 5 or 6 inches high, and 1 or 1¼ thick, holding 1 pound, would they be liable to fall down in handling, in retailing, etc. Has any one had experience with such thin boxes? If so, please report on the practicability of them. At present I use boxes 2 inches thick.

P. MOYER.

Hartstown, Pa., Jan. 29, 1883.

Comb Foundation a Great Help.

I had 18 colonies last spring, and I put into winter quarters 34 colonies. They did nothing till the middle of July; since that I obtained from them $100 worth of comb honey. I could not get along without comb foundation. I think it pays well to use it, as it saves the expense of separators. I have Italianized part of my bees, and like them much better than the blacks. ALFRED GALE.

Shelby, Ind., Jan. 23, 1883.

Two Queens in a Hive.

The hive was occupied by a colony of pure Italians, with a queen two years old, having her wings clipped. I had been giving my bees a good deal of attention, honey was coming in fast, and the bees were showing signs of swarming. About August 25th, I was passing the hive, when my attention was called to it, by seeing quite a large ball of bees on the alighting board. I pushed them apart and discovered the clipped queen in a dying condition. I took her to the house, but could not save her. I thought I would try and find out what was the trouble, so I opened the hive and examined it thoroughly. I found the colony in good condition, with plenty of eggs, brood in all stages, and *also* a young, lively (and I believe fertilized) queen.

Cato, Mich. S. J. YOUNGMAN.

Buckwheat for Honey.

It is customary for farmers, in this section, to "summer fallow" a field intended for wheat the next year. This is done to enrich the land and clean it of foul weeds. How would it do to sow such a field with buckwheat as early as possible after putting on it the usual barn yard manure? Would it give the bees "a lift" in time to plow under about the middle of August, or would the hot weather kill the flowers for honey? Would it help smother out the thistles, etc.? Taking all together, would it be a good way to get honey, and yet help the field for a wheat crop? The experience of bee men is solicited.

JOHN YODER.

Springfield, Ont.

[Buckwheat, if sown about the middle of June, may be made to bloom about the middle of July, instead of in August as it usually does, but the honey is inferior both in flavor and color, and is generally undesirable for market. It would be far better to plant sweet clover for the bees, and it would not interfere with farming operations—as it can be sown in waste places, such as fence corners, road sides, etc.—ED.]

Double-Walled Hives.

The colonies of bees that survive the last week's blizzard are entitled to a chromo. For four days, last week, the mercury stood between 25° and 30° below zero. I am wintering 16 colonies out of doors, in double-walled hives, with dead-air spaces between the walls, made with building paper. If I have any success with them, I may give you a description of the construction of these hives, but if I succeed in freezing the 16, I shall doubtless remain as dumb as an oyster.

JOHN CORSCOT.

Madison, Wis., Jan. 26, 1883.

Good Results.

I started, in the spring of 1882, with 3 colonies of hybrid bees. I increased them to 9, and took 375 lbs. of comb honey.

L. W. GRAY.

Rushville, Ill., Jan. 22, 1883.

Yellow Sweet Clover.

Six weeks before the white variety bloomed, I noticed in my stack yard some of the yellow sweet clover in bloom. Like the white, it does not blossom the first year; but it commences to bloom about May 10th, while the white does not bloom until about June 20th. It gives twice as many blossoms as the white, and the bees work on it freely when the white is blooming by its side. I suppose the wild pigeons must have brought the seed to my yard.

S. P. SOWERS.

Dunlap, Kansas.

Bees Wintering Finely.

The bees are wintering finely, in the cellar, although it was the coldest weather we have had many years.

L. E. WELCH.

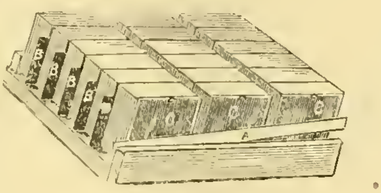
Linden, Mich., Jan. 24, 1883.

Comb Honey Rack.

Please describe, in the BEE JOURNAL, how to make a comb honey rack.

L. A. LOWMASTER.

[It would be very difficult to describe it so as to be understood by the ordinary reader. It will be far more satisfactory to get a sample and examine it. The engraving shows one used with separators on the Langstroth hive.—ED.]



Sweet Clover, etc.

What parts of the country are the best for the production of honey? What proportion of advantage has a good timbered district over a prairie pastural region for bees and honey? Will sweet clover form a permanent sward, or does it die out when two years old, as I have heard? Will it continue in bloom nearly the year round in our most Southern States?

W. M. WOODWARD.

Wilmington, Ill.

[Any place near basswood timber, or where white clover abounds, would be good. In the absence of these you would have to depend on planting for honey, such as sweet clover, alsike clover, mignonette, cleome, figwort, etc. Sweet clover should be planted on the same ground two successive years, in order to obtain a continuous bloom. It blooms from June till frost, and will thrive on any soil and in any climate. A good timbered district has the advantage of being better protected from winds, and from many of the trees the bees obtain honey and pollen.—ED.]

Water Scarce and Wells Dry.

We are having the driest winter in Maine for many years; the rivers and lakes are very low, many small streams and shallow wells are entirely dry, and people are obliged to melt snow and haul water for daily use in house and barn. The weather is very cold and dry. Bees wintering nicely, so far as I know. We are reading up and getting ready for next year's work. I am reading "Langstroth on the Honey Bee." This book can never go out of use among bee-keepers. Why can it not be revised, and some additions be made, so as to bring it down to the present condition of apiculture?

J. A. MORTON, M. D.

Bethel, Maine, Jan. 26, 1883.

[Mr. Langstroth has commenced a revision, but his health is so poor, that he may never finish it. It *is* an invaluable work, and will always find a place in every *good* library.—ED.]

Wintering Without Bad Symptoms.

I now have 500 colonies of bees; 460 out of doors, packed, and they have no bad symptoms, so far. It was 20° below zero, once, here.

JAMES HEDDON.

Dowagiac, Mich., Jan. 26, 1883.

Honey Plants of Florida.

What are the principal honey plants of Florida, and what part of the State is best adapted to bee-keeping.

Gardiner, Me. O. L. SAWYER.

[The principal honey plants are saw palmetto, cabbage palmetto, sweet gum, snow vine, sweet bay, basswood, mangrove, etc. Many portions of the northwest are good, but the south coast, a little north of the 29th parallel, is said to be unsurpassed for bee-keeping.—ED.]

Bees Packed are Doing Well.

Bees are wintering well so far, both in the cellar and out of doors, although we have had a very cold winter so far. I have some packed with clover chaff, on the summer stands. They are all right so far. I took a peep at them, one morning, when the thermometer was down to 28° below zero. They were dry and comfortable, with no ice inside of the hives.

D. G. WEBSTER.

Blaine, Ill., Jan. 29, 1883.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

Convention Notices.

☞ The Texas State Bee-Keepers' Association will hold its Fifth Annual Convention at McKinney, Collin Co., on Tuesday and Wednesday, April 17th and 18th, 1883; at the residence of Hon. W. H. Andrews.

WM. R. HOWARD, *Sec.*
Kingston, Texas.

☞ The bee-keepers of Northeastern Michigan are hereby requested to meet at the Dayton Hotel, in Flint, at 10 a. m. on Tuesday, Feb. 13, 1883, for the purpose of organizing a bee-keepers' association. All bee-keepers are earnestly requested to come, and to bring with them any apiarian articles of interest that they may possess. A free room, and reduced rates of board have been secured.

W. Z. HUTCHINSON.
Rogersville, Mich., Jan. 22, 1883.

☞ The Tuscarawas Valley Bee-Keepers' Association will hold a meeting in the Town Hall in Coshocton, O., on Feb. 14, 1883, at 10 a. m. Every bee-keeper is wanted at this meeting. Every one interested in bees or honey is requested to be present.

J. A. BUCKLEW, *Sec.*, Clarks, O.

☞ The next meeting of the Haldimand, Ont., Bee-Keepers' Association will be held at Nelle's Corners on Saturday, March 31, 1883, at 11 a. m.

H. CAMPBELL.

☞ The Western Bee-Keepers' Association meets at Independence, Mo., April 28, 1883.

S. W. SALISBURY, *Sec.*

☞ The Northeastern Ohio and Northwestern Pennsylvania Bee-Keepers' Association will meet at Andover, Ohio, to hold their annual convention, on the second Wednesday and Thursday of February, 1883.

C. T. LEONARD, *Sec.*

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., February 5, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—Extracted, dark 7c. light, 9c. here.

BEESWAX—It is quite scarce. I am paying 30c. for good yellow wax, on arrival; dark and off colors, 17@25c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—There is no excitement in the honey market, but sales are fair to our regular trade. Offerings are plentiful of extracted and comb honey. Extracted brings 7@9c. on arrival. The sales of comb honey are very slow, although there is a large supply of first-class quality on the market. It brings 12@18c. on arrival.

BEESWAX—Comes in slowly and brings 20@30c. per lb., according to quality. CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The past month has not reduced the stock of comb or extracted honey, the receipts having been larger than the amounts taken for consumption. Prices are weak and irregular, ranging from 16c. to 18c. for white comb in the smaller frames; dark, very little selling, offered at 12½c. to 14c. Extracted, 8c. to 10c., according to color.

BEESWAX—32@33c. per ℔. for good.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—The market is at present stagnant. Offerings are not large, but they are receiving no attention from buyers.

White comb, 17@20c; dark to good, 11@13½c; extracted, choice to extra white, 8½@9½c.; dark and candied, 7@8c.

BEESWAX—We quote 25@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Strained, at 6@7½c., was salable—one lot of 17 bbls. bringing inside figure; but comb, very dull at 16c. to 18c.; and extracted do., 8@9c.

BEESWAX—Steady; choice, 27@27½c.; dark, 20@22c.

W. T. ANDERSON & CO., 117 N. Main Street.

CLEVELAND.

HONEY—Is very slow, just now hardly anything selling, stock on hand quite liberal. Sales slow at 19@20c. for best white 1-lb. sections; 18@19c. for 2-lb. Second grades not inquired after. Extracted very dull at 9@10c. in bbls. and 11@13c. in cans.

BEESWAX—Scarce, 28@30c.

A. C. KENDEL, 115 Ontario Street.

NEW YORK.

HONEY—Choice to fancy white clover honey continues scarce and firm, but buckwheat and extracted honey slow and irregular.

We quote: White clover, first quality, 1 ℔ boxes, 24@25c; fair to good, 22@23c.; buckwheat, 15@17c. Extracted, clover, 10@13c.; buckwheat, 9@10c.

BEESWAX—Only small lots of wax are moving, but the supply is light and prices held firmly for prime.

Western pure, 30@32c; southern, pure, 31@33c.

D. W. QUINBY, 105 Park Place.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—Our supply is gone; we have none to quote.

CROCKER & BLAKE, 57 Chatham Street.

☞ If you want the earliest, largest and most prolific of any corn seed in America, write to the famous seed grower, H. C. Beebe, Canton, Ill., for explanatory circulars and engraving.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

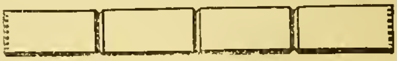
C. Olm's Comb Foundation Machine.
☞ Send for Sample and Circular.
18mtf C. OLM, Fond du Lac, Wis.

Bees for Sale.
50 Colonies of Bees, in Gallup frames, cheap.
200 Colonies of Bees, in Langstroth frames in prime condition.
J. H. ROBERTSON,
36Atf Pewamo, Ionia Co., Mich.

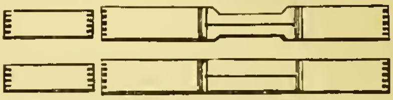
A NEW IMPORTATION OF
CHOICE
BOKHARA Clover SEED
has arrived and is for sale cheap.
Apply to CHARLES F. MUTH,
49sm4t CINCINNATI, O.

BE SURE
To send a postal card for our Illustrated Catalogue of Apiarian Supplies before purchasing elsewhere. It contains Illustrations and descriptions of everything new and valuable needed in an apiary, at the lowest prices. Italian Queens and Bees. Parties intending to purchase bees in lots of 10 colonies or more are invited to correspond.
J. C. SAYLES,
51sm15t Hartford, Wis.

HIVES, SECTIONS, &c.
Langstroth, Simplicity, and other hives.



The Lewis One-Piece Section.



The Lewis Two-Piece Sections.

We make the one-piece, two-piece, or four-piece dovetailed or nailed Sections, any size, from half-pound to 6x6x2 inches, or any other SUPPLIES for Bee-keepers, made of wood.
4¼x4¼ of any of the above kinds of sections, $4.50
All other sizes, larger to 6x6, ... 5.00
Half-pound sections, ... 3.50
Send for Price List and illustrations of our NEW HIVE for comb honey — something new, just out. Price Lists will only be sent to those that write for them. G. B. LEWIS.
Watertown, Jeff. Co., Wis., Jan. 1, 1883. 1ttf

Friends, if you are in any way interested in
BEES OR HONEY
We will with pleasure send you a sample copy of the Monthly Gleanings in Bee-Culture, with a descriptive price-list of the latest improvements in Hives, Honey Extractors, Comb Foundation, Section Honey Boxes, all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly*, to A. I. ROOT, Medina, O.

HEADQUARTERS IN THE SOUTH
For the manufacture of
BEE-KEEPERS' SUPPLIES.
Dunham and Root Foundation a specialty.
Italian Queens and Bees from March to November.
☞ Send for my Illustrated Catalogue.
5mtf PAUL L. VIALLON, Bayou Goula, La.

Fruit Evaporators,
To be used on a common cooking stove, capacity 3 to 5 bushels per day. Price, complete, $10; in the flat, partly put together, for $6. A few agents wanted. For particulars and prices for Evaporators, Queen Bees, etc., address
JOHN H. MARTIN.
9smly Hartford, Wash. Co., N. Y.

THE CONQUEROR.
Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent postpaid for $2. Address,
BINGHAM & HETHERINGTON,
ABtf Abronia, Mich.

OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

VOL. XIX. CHICAGO, ILL., FEBRUARY 14, 1883. No. 7.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

Students of Apiculture.

Dr. Jesse Oren, La Porte City, Iowa, thoroughly endorses the proposition of Dr. H. Besse, on the subject of preparing young men to become practical apiarists, by requiring them to serve an apprenticeship with some experienced bee-keeper, and pass a satisfactory examination before some of the best apiarists of the country, and to such "graduates" a certificate should be awarded by the National Association. This Association to appoint the Board of Examiners, and take charge of the whole business. Here is his letter:

I desire to offer my thanks to Dr. H. Besse, of Delaware, Ohio, for his article on the "North American Apiarian College." It just fills the bill. We want *you*, Mr. Editor, to give this matter an editorial consideration. The North American Society are sure to approve of the movement. Why not urge the officers of that organization to take all necessary advance steps to have all consummated at our next meeting at Toronto? Will you speak right out in the JOURNAL?

JESSE OREN, M. D.
La Porte City, Iowa, Jan. 12, 1883.

The *idea* is a good one. What is needed to advance the interests of progressive apiculture is a company of young men, thorougly practical and progressive, who can be employed to take charge of Apiaries; and such would be in constant demand all over the country. The apiarists of England have adopted this system, and, sooner or later it will be adopted in America.

On page 73 of the BEE JOURNAL for Jan. 31, Mr. James Heddon points out some obstacles in the way of successfully carrying out the plan mentioned by Dr. Besse. But Mr. Heddon thoroughly endorsed the necessity of students obtaining information and practical experience, in order to become adepts in the art, and adds:

My limited experience with students proves that this five months of study and practical experiment puts them on the right track, and prepares their minds for receiving all new truths right end foremost. All of my students, who have commenced bee-keeping, are to-day succeeding; two will begin in apiaries of mine, on shares, this spring. My faith is thus great; with these five months instruction, any reasonably apt man can have of me an apiary of 100 colonies on shares, a position which will pay him more than high wages, one year with another, and one in which he can "blunder" and finish his education at my expense. Of course I will direct the operations. I shall get better results than to sell the bees. It will not take five months to convince him that comb-honey production, when properly pursued, pays much better than extracted.

The only obstacle worth mentioning now, to the carrying out of Dr. Besse's proposed method of "graduating," is the unfortunate lack of united action among bee-men, and the "petty jealousies" that are sometimes allowed to mar, in some way or another, the beauty of design, or harmonious working out of the plans proposed by the National Association. We regret that this is so, but shall not here attempt to discuss the "why" and the "wherefore" of such a state of things—we simply admit the fact.

We believe that the officers and members of that body, have, to their utmost, done all that they could to make it a success, and to build an institution which would endure, and be handed down to future ages as an honorable "worker" in the cause of the progressive apiculture of the present century.

Should it fail of attaining this proud position, it will be either because its foes will be too zealous, or its friends may become disheartened and give up a war, which is quite distasteful to those whose only object is that of rearing a temple to scientific bee-culture, where its best interests may be discussed and guarded, and its devotees meet to confer on the issues of the moment, and the themes of the ever-progressing present.

Could this obstacle be overcome, then a plan might be devised for successfully carrying out "another advanced step," as proposed by Dr. Besse. Time alone will determine this point.

Migrating Apiary.

In last week's BEE JOURNAL, on page 77, Mr. Damkohler, of Clarence, Mo., said that a car load of bees passed through that place on its way south, and said perhaps we could tell him all about that shipment. We had not then heard of the matter, but by the Atlanta, Ga., *Constitution*, of January 9, we obtain the information, and here it is:

A CAR LOAD OF BEES.—On Saturday a car was switched on the East Tennessee & Virginia Railroad, and moved south.

It was filled with bee-hives. One hundred and forty of the latest styles of bee-hives, piled systematically on top of each other, and, to the foreground, a philosopher with his bed and board.

"Where are you going to take your bees?"

"To Florida for the winter. My name is Thomas McFarland Jackson, and I live in Northern Missouri. I have large apiaries that are forced to lie idle in the winter. I am going to take this car load of hives to Florida, where they can get honey every day in the year. As soon as the clover is out again in Northern Missouri I will take them back there."

"Will it pay you to move them?"

"I think so. It costs me less than a dollar a hive for transportation, and each hive will have from $6 to $7 worth of honey in it when I bring them back. That is what Italian bees, I sent to Florida last year, did last winter. Only Italian bees will thrive in Florida, as the moths eat up the common bees."

"Will you live in the open air there?"

"I am going to camp around with my bees. I believe I will bring back about $1,000 worth of honey in hives that would otherwise lie idle all the winter and be empty in the spring.

This migratory bee-keeping has been practiced from the earliest ages. In Egypt it has kept up for thousands of years, as we stated in the last issue of the BEE JOURNAL. Mr. T. F. Bingham, of Michigan, and others have practiced it; but nearly all have abandoned it, because it did not pay them.

Mr. Perrine, of this city, some years ago, lost several thousand dollars in a similar manner. He had a floating apiary, arranged to run up the Mississippi river from New Orleans, following the bloom till he was to reach Minnesota; but it did not work. Too many bees were lost, and the projector is wiser now, and $10,000 less rich.

California Honey Crop.

The California *Grocer* of Jan. 27, 1883 is on our desk, with an article "marked," criticising the statement made by Mr. McCaul, that the honey crop of California of last year was only 180,000 pounds and then adds:

> The *Grocer* has taken pains to collate the data of last year's honey product from the best available sources. These figures are very nearly, if not absolutely, correct; a statement that will be guaranteed by the fact that they were furnished by Messrs. Geo. W. Meade & Co., of this city, who are well known as the principal handlers of California honey:
>
> | | |
> |---|---|
> | San Diego county—Comb...... | 300,000 |
> | " " Extracted.. | 315,000 |
> | Los Angeles county—Comb.... | 25,000 |
> | " " Extracted.. | 170,000 |
> | Ventura county—Comb......... | 5,000 |
> | " " Extracted.. | 180,000 |
> | Santa Barbara county—Comb.. | 6,000 |
> | " " Extracted.. | 30,000 |
> | San Bernardino county—Comb | 20,000 |
> | " " Extracted.. | 80,000 |
> | San Benito county—Comb..... | 10,000 |
> | Sacramento county—Comb .... | 8,000 |
> | San Joaquin county—Comb.... | 11,000 |
> | Scattering (both kinds), say.... | 10,000 |
> | Total.................. | 1,170,000 |
>
> Making a handsome allowance for any possible over-estimate, we, therefore, find that California's honey product for 1882 will considerably exceed 1,000,000 pounds, which compares rather favorably for us with the 180,000-declaration of our late guest, Mr. McCaul, of New York.

The *Grocer* then proceeds to correct Mr. McCaul's statement concerning the honey crop of California for the year 1878, in the following language:

> In his before-mentioned published report he states the California honey crop of 1878 to have been 720,000 pounds, when in fact the phenomenal crop of that year, by far the greatest ever produced in the State, reached the enormous figures of between 2,250,000 and 2,500,000 pounds. The light crop of last year paid fairly well after all, the average prices obtained being very good; for extracted, 7¾ and comb 13 cents per pound. California has been, and we believe will continue to be, the most prominent honey-producing section of the world.

We are glad to have this statistical information concerning the California honey crop. It will be very useful, and Dr. Miller will no doubt be able to use it to good advantage, in his forthcoming "Statistical Table" of the honey production of America.

To take these figures and the table we have already published of the "Honey Crop of Illinois," as officially reported by the assessors, and compare them with the reports that have been received by him, will give a good criterion by which to multiply the whole—and thus give the approximate results of the country at large.

Realizing the difficulties under which Mr. McCaul labored, we can attach no blame to him for his incorrect figures. He could give only such as were reported to him. If his information was only partial (and we do not see how it could be otherwise), his report must be necessarily incomplete, and, therefore, erroneous. The *Grocer* impugns his motive and deals out invectives, but would it not be better to take a charitable view of the matter? All will be thankful for the correction, and *cheerfully* give our sister State due credit for all that it can show it is entitled to.

Two years ago we endeavored to obtain correct statistics of the honey crop of California (as well as other States) and were unable to give more than a partial statement, for the reason that those interested did not respond to our call. We published what we did obtain, and then one of her champions roundly abused us for belittling its crop, and "applied the lash" to us in a most unmerciful manner!

To show that California needs a reform in this matter, we notice on the same page of the *Grocer*, as the article above referred to, the following editorial, which fully sustains all that we claim. It is headed "A Reform in Grain Statistics;" but the reform should evidently go far enough to include "honey" and other industries. The editor of the *Grocer* says:

> In the matter of collecting and supplying to the public officially-corrected statistics of her agricultural, commercial and manufacturing interests, California is certainly not a progressive State. Such statistics, and especially those referring to agricultural industries, are of great importance to the business community. Our grain interests, already large, are destined ere many years have passed to become a strong feature in the annual product of the country, and it would be well if we inaugurated, in the now comparative infancy of the industry, some system by which reliable data could be furnished to the public as to the results of each harvest during the period of its thrashing. Such a system has been adopted in almost all, if not all, of the great grain-bearing States to the east of us, and has proven of immense value to the manifold interests that are devoted to the culture and sale of, and manufacture from, the cereals. What would be the best system we do not pretend to say, but would suggest the adoption of some such plan as the one now in force in Michigan, which is based upon regular reports, sent to the Secretary of State, from every thrashing machine at work in the State. Let some properly-constituted authority at the beginning of each season supply to every thrashing machine in the State, blank forms, upon which must be noted daily the number of sacks thrashed by each machine; and let those forms be returned to the statistical officer, or bureau, at stated intervals, daily or weekly, as may be thought best. By this means an accurate knowledge can be had of all grain thrashed in the State, to the great benefit of merchants and the public at large; and our annual statistics, which are too often of a highly speculative character, can be correctly built upon a basis of satisfactory information. To the Legislature now in session we recommend this suggestion as one worthy their careful consideration.

Bee-Keeping in North Carolina.

There is some stir now in the highlands of North Carolina about bee-keeping, and the Blue Ridge *Enterprise*, of Jan. 25, 1883, remarks as follows, on the subject:

> If there is any special industry which this mountain region is particularly adapted to, it is that of bee-keeping. Tons of honey ought to be gathered and shipped from these mountains every season, while at present there is not one pound sent out, nor one-fourth of the supply gathered which home-demand requires. But in order to make bee-keeping profitable, or even worth pursuing, the old gum and box hive must be abandoned, and the modern frame hive and improved implements now necessary to successful apiculture,

adopted. Preceding these, however, one of the text-books on bee-keeping should be procured, and one of the journals which make bee-keeping a specialty be subscribed for and carefully studied. Two or three dollars invested in this kind of literature would pay an intelligent man or woman, who has a half dozen bee-gums, managed in the old, shiftless style, a hundred-fold on the outlay, the first season. The AMERICAN BEE JOURNAL, is accorded the first place in the catalogue of bee papers by the leading bee-keepers throughout the country. Being issued weekly it is always in advance with everything new and interesting in bee-keeping. There is no better or more thoroughly practical publication on bees and honey in the world, and all who keep bees and aim to keep them in a practical and intelligent manner, for either profit or pleasure, should subscribe for either the weekly or monthly edition of this paper.

Collapse of Another Glucose Factory.

Mr. A. B. Weed, of Detroit, Mich., has sent us a Detroit paper, and referring to an article it contained announcing the collapse of the "Michigan Grape Sugar Company," says: "All bee-keepers must be pleased to note the decadence of the glucose business. I have been much interested in the exposures which the BEE JOURNAL has made from time to time. I have also been interested in the subject of small sections."

Summed up, the article in question says that the works cost $300,000 and $100,000 more have been sunk in running expenses. The high price of corn, the remarkable sugar and molasses crop in Louisiana, last year, the decline in the demand for the product for export, and expensive alterations in their factory are assigned by the management as the principal causes of the company's collapse.

Remedy for Dysentery.

Mr. J. M. Hicks, Battle Ground, Ind., writes as follows to the *Grange Bulletin*, concerning this disease and remedy for it:

Dysentery is usually brought on by the bees feeding upon sour or impure honey. It is also frequently produced by being disturbed in some way just before a sudden change in the temperature, which, if very cold immediately after they have filled themselves, you may be quite sure your bees will have dysentery. We suggest the following remedy:

Take of good granulated sugar, 4 lbs., and just enough of water to make it into a mush (not syrup) and add 40 drops of carbolic acid, stirring, so as to incorporate all thoroughly, and then mould into cakes so as to feed your bees, by laying two or three of the cakes of the candy on their brood-frames, and your bees will, in a few days, have relief. This is the best remedy I have ever found after the disease has thoroughly set in. It is a well-known fact that carbolic acid is one of the most powerful disinfectants we have in chemistry.

And now I wish to further say, I have at all times believed that an ounce of prevention was worth at least a pound of cure, and in order to be more successful in the future in preventing this malady, we recommend a free use of rock salt to be placed in a small trough, a few yards from your bees, and fill with water and cobs so that the bees will visit it without danger of drowning. This remedy I have found to be a sure preventive for dysentery as well as the dreadful disease called foul-brood, which has proved to be with some, very difficult to manage.

Free Advertising.

Nothing is more embarrassing to a publisher than to receive articles intended for the reading columns, with matter woven into it, advertising some particular hive, section, foundation, extractor, etc. We have received quite a number of such articles lately, from correspondents, and must here kindly say to all, that such are not acceptable. Our advertisers, who pay for their notices, would consider it unjust to them, if we were to admit such, and would have reasonable ground for complaint. Our advertising columns can be used for all such matter at 20 cents per line, and in that department no injustice will be done to others. This will explain to some why such advertising matter is omitted from their articles, and to others, whose articles would be pointless without the advertising portion, why they do not appear at all.

American Honey vs. German.

The following I have copied from the *American Journal of Pharmacy*, February, 1883, page 98:

"HONEY.—Eugene Dietrich has repeatedly observed that good American honey may be more easily obtained than German honey of good quality, the latter, on keeping, becoming acid by fermentation, at the same time acquiring an unpleasant taste, and when clarified, of a dark color and a caramel-like taste; but fresh German honey yields, on clarification, an excellent product. The cause for the better keeping qualities of American honey has not been ascertained. —*Rundschau*, 1882, page 662."

Thinking that it may be of sufficient interest to appear in your valuable JOURNAL, I take pleasure in sending it, though possibly it may neither be new to you or the older patrons of your JOURNAL.

FERD. REPPERT.
Muscatine, Iowa, Feb. 7, 1883.

Separators of Wood.

What is the address of C. Van Eaton, mentioned in connection with wooden separators, on page 43 of the BEE JOURNAL of Jan. 17?

WM. ROBERTS.

It is Charles J. Van Eaton, York, Livingston Co., N. Y.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., February 12, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—Extracted, dark 7c. light, 9c. here.

BEESWAX—It is quite scarce. I am paying 30c. for good yellow wax, on arrival; dark and off colors, 17@25c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—There is no excitement in the honey market, but sales are fair to our regular trade. Offerings are plentiful of extracted and comb honey. Extracted brings 7@9c. on arrival. The sales of comb honey are very slow, although there is a large supply of first-class quality on the market. It brings 12@18c. on arrival.

BEESWAX—Comes in slowly and brings 20@30c. per lb., according to quality. CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The past month has not reduced the stock of comb or extracted honey, the receipts having been larger than the amounts taken for consumption. Prices are weak and irregular, ranging from 16c. to 18c. for white comb in the smaller frames; dark, very little selling, offered at 12½c. to 14c. Extracted, 8c. to 10c., according to color.

BEESWAX—32@33c. per lb. for good.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—The market is dull, particularly so for comb. Only nominal quotations can be given.

White comb, 17@20c; dark to good, 11@13½c; extracted, choice to extra white, 8½@9½c.; dark and candied, 7@8c.

BEESWAX—We quote 25@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Strained, at 6@7½c., was salable—one lot of 17 bbls. bringing inside figure; but comb, very dull at 16c. to 18c.; and extracted do., 8@9c.

BEESWAX—Steady: choice, 27@27½c.; dark, 20@22c.

W. T. ANDERSON & CO., 117 N. Main Street.

CLEVELAND.

HONEY—Is very slow, just now hardly anything selling, stock on hand quite liberal. Sales slow at 19@20c. for best white 1-lb. sections; 18@19c. for 2-lb. Second grades not inquired after. Extracted very dull at 9@10c. in bbls. and 11@13c. in cans.

BEESWAX—Scarce, 28@30c.

A. C. KENDEL, 115 Ontario Street.

NEW YORK.

HONEY—Choice to fancy white clover honey continues scarce and firm, but buckwheat and extracted honey slow and irregular.

We quote: White clover, first quality, 1 lb boxes, 24@25c; fair to good, 22@23c.; buckwheat, 15@17c. Extracted, clover, 10@13c.; buckwheat, 9@10c.

BEESWAX—There is only a moderate supply of beeswax and prime lots held firmly.

Western pure, 30@32c; southern, pure, 31@33c.

D. W. QUINBY, 105 Park Place.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—Our supply is gone; we have none to quote.

CROCKER & BLAKE, 57 Chatham Street.

CORRESPONDENCE

For the American Bee Journal.

The Use I Make of the Bee Papers.

O. M. DOOLITTLE.

The bee literature of to-day, has more to do with the successful management of the apiary than any other one thing, hence it is of the utmost importance that we have it so arranged that it can be of the most service to us. Although I have learned some things through conventions, and by visiting those keeping bees, yet the major part of the little I know about bees and honey-producing, has been gotten by reading the different bee publications, and putting in practice what I read, thus learning how the thing was done by the experimental knowledge which I gained thereby. Of course, many things I had great confidence in, failed, when I put them in practice, and had to be given up; but the larger part proved of real service to me.

Some people seem to take a bee paper simply for the name of so doing, for when asked if they noticed some very instructive article, their reply is, "No; I do not get time to read much." Such help some by taking a publication, for they help the publisher to give us better paper, type, etc.; but they are just as good as dead, so far as their helping the real life of a publication, or the publication helping them. For such persons this article was never intended, but those who read for the purpose of using what they learn, are the persons I wish to talk to.

When the BEE JOURNAL first comes it is carefully placed in an Emerson binder, and *Gleanings* is treated in the same way. The other bee papers are carefully laid away in a place set apart for them, so that at the end of the year they are in perfect order to be bound, if I wish to have them. If I do not care to be to this expense, I bind them myself by a plan similar to the Emerson binder, or serve them as Mr. Hasty does, driving wire nails through and clinching them, so as to hold them together; or secure them in any way to make them handy for reference, for it is this "referring" to them, I wish more particularly to speak of.

The most important part is to preserve the life of our bee literature, and make good use of it, after we have it all preserved in good order. With all my cares, I cannot find time to re-read the volume a second time to get at the many points in it which are of real value, for much of the matter is hardly worth reading a second or third time. If I was obliged to read all a second time, to get the points I considered valuable to me, I fear I should never get them all. I read it all once, and then I want it so that I can get at that which is really valuable when wanted at another time. To do this, whenever I sit down to read a fresh JOURNAL, I have a pencil with me, and when I find a new idea, or an old one I wish to farther experiment with, I mark it. In some instances the marks will embrace a whole article, while others call attention to only a few lines. In future years, or at any time I wish to find that which is really valuable in my volume, all I have to do is to read the marked passages and thus get the cream of the whole year in a little time. But I often find that some of the best ideas are suited only to certain seasons of the year, and as my memory is not sufficient for dates and set time, I must have some means to remind me of the valuable points, just when they are of use.

If I read in January the best way to get good queen-cells, or something valuable regarding extracting honey; then in February the best way to take off filled sections, and so on, till my mind is insufficient to contain them all, and have them ready to bring into use at the right time, how can I manage so that I can use what I read, just at the time it would be of the most benefit to me? After studying on the matter for some time I decided on what I call a "Reference Book," which is simply a small blank book, bound in leather. Any memorandum or account book will answer the purpose, providing it has at least 24 leaves in it. This book I arrange similar to an assessor's book, which has the letters of the alphabet from A to Z on the outside margin of the leaves. Cut the leaves just as you would to letter them, but instead of lettering them, write on the little square of the first, "Jan. 1st;" on the second, "Jan. 15;" on the third, "Feb. 1st;" and so on, giving one leaf, or two pages, for each half-month, to the end of the year. When I sit down to read, I have this book and a pencil near me, and when I come to any passage, part of an article, or an entire article that I think will be of service to me, either as something new that promises to be valuable, or some new plan of using something already familiar to me, I mark it with my pencil, and then jot it down in my book under the date to which it is applicable. Thus I get all the matter which I consider valuable contained in whatever I read regarding apiculture, arranged in reference to the time it is to be used, in this book.

When January 1st arrives, I look over all there is on this page, and, for instance, commence to make a few half-pound sections as described by J. C. Newman & Son, page 23, A. B. J., by way of experiment, if I chance to find a note regarding them in this little book.

To explain more fully: On page 25, I read how to make a paste for honey labels. As I had always used dextrine, which was inconvenient to procure, I thought this recipe might be better, and the ingredients are also more easily obtained. So the recipe was marked. As the last half of October would be the time I would most likely want to use it, I turn to Oct. 15th (by putting my thumb on that date when opening my reference book), and write, "A. B. J., 1883, page 25,—Paste for honey labels." When this date (Oct. 15th) arrives, I look over all that is written there, and, as I come to this, I turn to page 25, and there is just what I want, at the right time, for in a day or two I must get my pails of extracted honey ready for market. So I try a part with the new paste, and some with what dextrine I have left. If this paste proves valuable I mark those words on my reference book with a star, or if worthless I draw my pencil across the whole line, thus crossing it off.

If I have made it plain, and I think I have, it will be seen that I have all the real worth of many volumes in this little book, while the matter which was worth only once reading is left out. Different persons would make a different line of selections from what I should, but the plan is a good one, in my opinion, and one that will be of great service to any one who follows it.

Borodino, N. Y.

[The plan is an excellent one. We adopted a *similar* one for our library over 25 years ago, and it proved very valuable, saving much time and labor.—ED.]

For the American Bee Journal.

Ohio State Convention.

The convention of the Ohio State Bee-Keepers' Association was held in Columbus, Ohio, Jan. 9, 10, 1883, in the parlors of the Ohio *State Journal*. The Convention was called to order by the president, Dr. H. Besse; the minutes of the last meeting were read and approved.

The requisites of a perfect bee-hive?

Mr. Riegle, of Adelphi, said, it was formerly thought by our forefathers that a bee-gum was the all requisite; he gave a history of some of the improvements in hives. Among the essential requisites, are proper ventilation and the best manner for production of surplus honey, he noted them as follows: 1. Proper size, 1,800 to 2,000 cubic inches, inside measurement. 2. Movable combs in the brood chamber. 3. Proper arrangements for ventilation. 4. Ease of adjustment for handling bees, and securing surplus honey in best shape for marketing. 5. A proper degree of warmth and dryness.

Mr. Kingsbury, of Mt. Vernon, asked relative to chaff hives. Mr. Riegle said, the chaff hive was not always proof of successful wintering.

The president said, he had wintered successfully in a bee-house; he described his bee-house he built, one with double walls, 6 inches of space filled with sawdust, valves above and pipe tube, made of boards, leading outside, with trap door for ventilation; it cost him $100, size 10x20 feet. His bees, in the bee-house, did not consume more than 10 pounds of honey to the colony, while those wintered on the summer stands consumed 20 to 30 pounds. He preferred sawdust to chaff, for packing bees, because it was handier to get.

Mr. J. L. Mock, of Columbus, advised to use kiln-dried sawdust for packing. He thought the bees went into winter quarters with too few young bees.

Adjourned till 1:30 p. m.

AFTERNOON SESSION.

The meeting was called to order promptly at 1:30 p. m.

Which is most profitable to bee-keepers, comb or extracted honey?

Mr. Rhulen, of Gahenna, said, people would not buy pure extracted honey, saying they could buy syrup far cheaper (not knowing it was made of glucose, which was poison). A man told him he could feed his bees glucose and sell it for honey and make two to three hundred per cent. on it.

Mr. Benedict said we must educate the people as to the difference between pure honey and glucose; the man who will adulterate his honey can make more money at the beginning, than one who is honest.

Mr. Riegle made some scoring remarks against bee-keepers, who would put glucose in their honey; that it injured the honey interest, and he that would do it should be expelled from society.

Mr. Kingsbury, of Mt. Vernon, answered Mr. Rhulen, that he ought to have gone to the printing office and exposed the man who acknowledged he made honey of glucose; the bee-keepers ought to hang together and drive out adulterators.

The sense of the meeting was to produce extracted honey and drive out the adulterators.

Some one asked how to induce bees to work in sections. Dr. Besse said, put a frame of brood among the sections you want filled.

Shall we encourage the new races of bees?

Mr. Riegle said, he and his partner, Mr. Drum, purchased a Holy Land queen and reared queens from that one. It required about two smokers and three or four thicknesses of veils while handling them, and persons who had difficulty in handling Italians had better let alone the Holy Lands; they will give a bigger dose of stings than you can stand; he gave them credit for some good qualities: they started to work earlier in the morning than the Italians; they gather honey in cold weather, when Italians will stay at home; they do not dart for the face like the Italians, but will go for a person's neck; his new queens were fertilized by Italian drones; he thinks they are about as hardy as Italians; they were more docile when bred down to about the third generation with the Italians.

Mr. Benedict indulged in a humorous description of the savagery of the cross between the little black bee and the Italian; he did not want any acquaintance with that class of insects, but he said a cross between the brown bee and the Italians made a tolerably decent bee to handle.

The most desirable place to keep bees in winter?

Mr. Goodrich, of Worthington, said, for the past two years he had brought his bees through safely; this year he had used special care, but his bees are restless, and he had nearly decided that no plan is always successful.

Mr. Benedict said, he was cautious about giving advice to beginners; some of them had not followed the advice as it had been given; they were careless, and would then blame their advisers.

The president said, he would throw the doors open at night, and give those restless bees, which were affected with dysentery, more ventilation.

Mr. Helphrey, of Utica, said, his bees have dysentery except two or three colonies, which had less honey than others; those having the least honey were free from it.

Mr. Benedict, of Bennington, said, there is a good deal of dysentery this winter, he thinks the cause to be unripe honey, gathered late.

Dr. Besse said, full combs of honey would compel the bees to gather between the combs when they ought to have empty cells to get into; said he had given an ounce of laudanum and the same of essence of peppermint to the gallon of syrup; he found it a cure for dysentery.

Mr. Riegle had observed closely what the members had said in regard to their losses by dysentery; he believed, from their description, the bees were too warm and had not ventilation enough; he gave the plan of his partner, Mr. Drum, for wintering out in a shed, with doors to open in warm weather; if he had bees with dysentery, he would take their combs away and give them clean combs, or wash and dry them, and put them back in the hives.

Mr. Benedict gave his plan of giving bees a flight in cold weather; for this purpose he would use hives with loose bottoms and built so that they can be attached, and stacked one above the other. Take them into a warm room and cover the brood frames with clean paper, leaving open a place for the bees to crawl into the upper hives; they will then fly and eject the feces; when they return to their places in the lower hive the upper ones can be cleaned and removed; the paper should be replaced by a clean quilt, and their condition is improved. He believed we would have trouble with the bees, so many are reported with dysentery. "I think they gathered something last fall which was injurious; the honey should all be extracted, *all* of it, and give the bees clean combs and feed them white sugar syrup; it might be smart weed honey, perhaps not, but we should extract it and have the honey examined to ascertain whether it was pure, or bad for bees."

Mr. Riegle would be afraid to feed the bees sugar syrup in winter, unless they could seal it up.

Mr. Benedict did not think it would sour or ferment.

The chairman appointed Mr. C. M. Kingsbury as soliciting committee, and 12 new members were added to the Association.

Mrs. Jennie Culp, of Hilliards, O., said she was afraid she had killed some of her bees, by handling them when the weather was too cold. She asked if it is best to leave the quilt on the frames that was on all summer or use a new one? Mr. Goodrich said it was best to put on a fresh quilt. She asked if she should use the same combs, if they are mouldy? Mr. Benedict and the secretary coincided to use the mouldy combs; the bees will clean them up and use them.

Mr. M. J. King, of Chardon, O., asked which is the best bee? Dr. Besse said, "The golden-banded fellows." Mr. Benedict said, "The pure Americanized Italians, those which have been specially bred for honey producers."

Mr. Riegle asked, "Should farmers keep bees?" The secretary said those who neglected their bees were not the successful bee-keepers, and careful bee-keepers were not always successful.

President Besse and Mrs. Jennie Culp exhibited samples of extracted honey.

The president appointed as a committee on exhibits: Messrs. Benedict, Rhulen and Riegle; and as a committee on the revision of the constitution: Messrs. Riegle, Benedict and Kingsbury. Adjourned to 7 p. m.

EVENING SESSION.

Reports of committees were called for. The committee on revision of constitution reported in favor of erasing certain words in Article VIII of the constitution. Adopted.

The committee appointed on exhibits reported as follows: Eight samples of extracted honey by President Dr. H. Besse; 2 of his own production; 1 each of Palmetto honey, from Florida; buckwheat, from Kentucky; horsemint, from North Texas; horsemint, from South Texas, early; horsemint, from South Texas, late; goldenrod, from Ohio, and white clover from Ohio; all of which were very interesting to the committee and members who sampled them. The flavor of the different varieties is very distinct; some fine; others not so good. Mrs. Jennie Culp, of Hilliards, showed 1 bottle of white clover honey and 1 of linden, both very fine. A smoker, from W. C. R. Kemp, of Orleans, Ind., which contained some good points.

The best sized sections.

Mr. Riegle said there are several sizes or forms of sections, the one-pound or Root section should be used by those who use the Langstroth frame; it is convenient for families of small means. Voted that the one-pound section is the best for surplus honey.

Mr. Benedict said, in regard to the spacing of brood frames, I am very careful to keep them in proper space, and, as near as possible, the same distance apart, as the bees construct them naturally.

Mr. Riegle was in favor of spacing frames 1½ inches apart, from center to center, which is the proper distance for the bees; he likes the Huffman arrangement for spacing, especially for beginners.

Will it pay to cultivate honey producing plants and trees for bees?

Mr. Riegle thought the linden profitable for honey and shade, also the black locust is a honey producer, and the locust is profitable for timber; he had planted 5,000 young locusts; he believed the borer would not infest the locust, when it was planted close for timber; he believes if any plant will pay for honey alone, it is sweet clover (melilot); he does not think alsike will pay for honey alone.

Mr. Rhulen had 25 acres of alsike clover; the hay is far superior to the red clover.

Mr. Benedict believes the yellow willow produces more honey than the apple blossoms.

The secretary said he had planted 50 linden trees, and they bloomed the second year after planting.

The committee appointed by the chairman to confer with the State Board of Agriculture, were Messrs. Riegle, Benedict and Helphrey. After taking a recess, the committee reported they had seen the Secretary of the State Board, and could do nothing until after the election of the new Board.

Adjourned till 9 a. m. to-morrow.

SECOND DAY.

Jan. 10. Meeting called to order at 9 o'clock a. m. The subject for consideration, was "Facilities for Exhibits at the State Fair." The president thought we ought to have a suitable building for exhibits. Mr. Benedict and Mr. Riegle thought there should be about one-fourth of an acre of ground enclosed with wire fence, attached to the hall, for the use of bee-keepers. Messrs. Benedict and Helphrey, on committee to confer with State Board, were excused, as they had to go home, and the chairman appointed the secretary in their stead, who, with Mr. Riegle, were to petition the State Board of Agriculture, on Thursday, for better facilities for exhibits on the State Fair grounds.

The president presented the following plan for a report of each member:

Gentlemen of the Convention: It is my duty, as the Ohio Vice-President of the North American Bee-Keepers' Association, to make as full and complete a report as possible of the number of colonies owned, and amount of honey, wax, etc., produced during the incoming year in the State of Ohio; all bee-keepers will confer, not only a favor upon your president, but upon the whole fraternity which extends throughout the greater part of North America, by filling out the following statistical report, and sending the same to Daniel Spear, Sec., Cardington, Morrow Co., O., just before our annual meeting, which will be held during the State Fair in Columbus. In this way you can greatly assist me in this work. Now, gentlemen, I should justly feel proud if you would assist me to so represent the great commonwealth of Ohio in the North American Association, as to have the *fullest* and *best report* of any State, Territory or Province; and this we can do if you will have the kindness to assist me in so doing.

1. Name, P. O. address and county.
2. No. of colonies owned Sept. 1, 1882.
3. No. of colonies owned May 1, 1883.
4. No. of colonies owned Sept. 1, 1883, or at time of next annual meeting.
5. No. of colonies showing yellow or golden bands.
6. No. of colonies of blacks.
7. No. of colonies sold during the year.
8. No. of colonies bought during the year.
9. No. of queens sold during the year.
10. No. of queens bought during the year.
11. No. of lbs. comb honey taken during the year.
12. No. of lbs. extracted honey taken during the year.
13. No. of lbs. wax honey taken during the year.
14. Kind of hive used or preferred.
15. How and where wintered.
16. If fed during spring, and if so, how liberally.

This plan was adopted by the convention.

Mr. A. S. Goodrich asked whose manufacture of comb foundation is best? Dr. Besse said, "The Dunham." Mr. Goodrich asked if it made any difference which side of the foundation is fastened to the top bar? The secretary had never found that it made any difference.

Mr. Riegle said, "the Dunham foundation pleased him best. Some three years ago foundation was manufactured in the East, having wire in it, which troubled the bees; they tried to gnaw out the wire. Lately the foundation invented by Mrs. Dunham (credit to the ladies), was preferred, because the walls are stronger." "The flat-bottomed foundation was another improvement." "The fish bone can be detected whenever it is used in surplus comb honey;" he showed, by diagram, his plan of putting full sheets of comb foundation in brood frames.

Mr. McDowell asked, is it any advantage to introduce fertile queens after a first swarm?

Mr. Benedict said, his plan for multiplying colonies, was this: Have ready a good supply of old comb in movable frames, drum out the bees and queen, put them in a new hive, place it on the old stand; place the old hive on a new stand, and the next day give the old colony a fertile queen. This plan keeps a laying queen in each hive. If further increase is desired, go through the same process in about 15 days, with the old hive, as before; there will be just as much larvæ and brood, as when first divided. By following this plan the old colony is continually producing more bees; in this way we improve our natural swarming.

Mr. Riegle said, a natural swarm will always accept a queen when it swarms.

Mr. Benedict said, bees gathered more *fall* honey *last* season than they had gathered at that season of the year for 30 years.

Mr. Helphrey stimulated his bees in April; they swarmed in that month, which alarmed him; he looked and found they had no honey.

The following is the statistical report of members:

Mr. S. C. McDowell, 250 lbs. of surplus extracted from 4 colonies; buckwheat and smartweed honey.

Mr. Rickenbacker, about 25 lbs. to the colony, fall honey.

S. H. Rhulen, 21 colonies, wintered on summer stands. I found 10 of them were starving; fed 200 lbs. sugar syrup; increased to 33 colonies; got about 2,500 lbs. of comb honey and 1,000 lbs. of extracted honey.

Earle Clickenger had 9 colonies; had no increase; got 450 lbs. of comb honey from 6 colonies; but no honey from 3 colonies.

C. D. Bennett had 14 colonies in spring; got 550 lbs, of comb honey and 250 lbs. of extracted; the season was poor in the spring, but good in the fall.

A. S. Goodrich had 30 colonies in spring, in good condition; the fore part of the season was very bad; had to feed up to June 5, to keep them from starving; got nothing from fruit blossoms, and very little honey from white clover; increased from 30 to 54; they gathered very rapidly from fall flowers; the hives are very full.

Mrs. Jennie Culp, I am an A B C scholar, I gave each colony 1½ lbs. of maple sugar; had 22 colonies; increased to 30; I extracted June 1, put the honey in 6 gallon stone jars to ripen; had over 4 barrels of extracted honey at Fair time (Sept.); extracted after the Fair; altogether had nearly 5 barrels of honey; attribute my success to feeding in spring, and to having plenty of surplus combs; I sold all my surplus honey for 20 cts. per lb.

A. C. Castle, I am a novice; have 15 colonies of black bees; sold none, increased to 22; got 275 lbs. of comb honey; the fall yield was the best.

J. G. Shiably, had 3 colonies in spring (2 in box hives and 1 in movable frame); got nearly 150 lbs. of comb honey; I am a beginner; the fall yield was the best.

M. S. King, commenced with 13 colonies; worked for increase rather than for honey; the season was very poor. Mr. Johnson, in my vicinity, got only 3 lbs. to the colony.

Mr. Riegle: I had in the spring 50 colonies; yield from maple and yellow willow, followed by fruit blossoms and poplar honey, then white clover; I got the least yield last season from white clover for several years; got 700 lbs., mostly extracted honey; hardly any increase; the fall yield was from smartweed and asters.

Mr. Drum increased from 50 to 75 colonies, and had very little honey.

Mr. Benedict gave his plan of working for extracted honey. Have your hives made to fit, one on top of another; put a colony on the top of the first; after three days let them go together. Do not extract till fall, but tier up one hive above another, and give them combs or foundation to work on and fill.

President Besse commenced the spring with 55 colonies; increased to 107; put into winter quarters 101 colonies; got 1,000 lbs. of comb honey and

1,000 lbs. of extracted, about one-half clover honey, and the rest was fall honey; sold the extracted for 20 cts. and the comb honey for 22 cts. per lb.

Voted that Mrs. Jennie Culp had produced the most honey, for the number of colonies she had, of any member of the Society.

A vote of thanks was tendered the Ohio State Journal Co., for the use of their parlors, in which the Bee-Keepers' Convention was held.

Voted to adjourn to meet at the call of the secretary, at some place in Columbus. DANIEL SPEAR, *Sec.*

Report of the committee appointed by the O. S. B. K. Association, to petition the Ohio State Board of Agriculture for a building, in which to exhibit bees and apiarian productions:

COLUMBUS, O., Jan. 11, 1883.

To the Honorable Directors of the Ohio State Board of Agriculture:

GENTLEMEN—We, the committee appointed by the Ohio State Bee-Keepers' Association, in convention assembled in Columbus, O., on Jan. 9 and 10, 1883, to represent to your honorable body the interest in apiculture and the demand for our productions, and urgently request that you erect, upon the Ohio State Fair grounds, a suitable building, with about one-fourth acre enclosed ground attached, in which to exhibit bees and apiarian productions.

Plan and approximate specifications herewith attached for Apiarian Hall.

We believe the size of this hall, 25x50 feet, to be sufficient for our present use, with space left at one end for extension of hall, if our interest in the future should require it.

SAMUEL D. RIEGLE,
DANIEL SPEAR,
Committee.

For the American Bee Journal.

Whitford's Surplus Case, etc.

JAMES HEDDON.

I was much interested in Mr. Leroy Whitford's description of his surplus case. The more so because I have have been over the ground. I have made and tested the **T** shaped tin supporters mentioned.

All are aware that I use a 4¼ in. high division piece of wood, nailed to the super. Well, on trying the tin rests, I returned to the old wood divisions, for the following reasons:

The tin rest does not, like the wood divisions, strengthen the case. They somewhat hold the sections apart at the bottom, with no corresponding wedge to stop up the corresponding opening at their tops. This means bee-glue. They are very likely to get knocked and bent out of shape by the least touch. It requires much more care to insert the sections in their proper place, than with the wood divisions. They are but little cheaper. You must use a case not the proper length to fit the regular Langstroth hive, or use sections not of such sizes as are commonly used by those using broad frames. I see no good in the movable divisions, except in case of where a bee-keeper wishes to alter his cases to suit a total change in size of sections. Then the same change can be made (with a little more trouble) with the case, using the permanent divisions.

I see no use in using three cases, each holding one-third of half-pound sections, and two-thirds of one-pound, when you can just as well devote two cases to the one-pound and the third to the half-pounds throughout; but I *do* see many reasons for having the shipping crates hold all sorts, and ours does; each crate holds, as follows:

12 4¼x4¼x2 (or 6 to the foot).
14 4¼x4¼x1¾ (or 7 to the foot).
21 4¼x2 13-16x1¾ (or 7 to the foot).
24 4¼x2 13-16x1½ (or 8 to the foot).

In each instance, the thickest of the one-pound and half-pound sections are used with separators, while the thinner ones are not. I consider an assorted crate an advantage on the market, but an assorted case is a disadvantage on the hives.

I used my **T** rests at the extreme bottom of the case, but I think I understand that Mr. Whitford (page 56) must place his so that the bottoms of the sections rest above the bottom of the case. Now, if the case rests *on the top* of the hive (as all cases should) and the hive has a bee space above the top bars of the frames (as all hives should), how about your proper bee space between the bottoms of the sections, and the top of the frames, where no honey board is used?

There is hardly any system of surplusage, that is so "awfully awful," that it does not possess *some* advantageous features over all others, and I think if I could be persuaded to use separators at all, I should use them in connection with broad frames, but not such broad frames as I used before, or any now in general use exactly, but such as I am now making for the coming season, and "the box of tin" experiments.

Those who advocate wood separators, 1-16 and ⅛ thick, do not tell us how long it takes the bees to glue up the less than bee spaces that the separators cause between the end pieces of the frames, at the top and bottom, where the narrower separators fail to fill it up. How long will so many bee-keepers violate the scientific principles laid down by Langstroth?

I think that there is now extant all the conservatism needed, regarding the half-pound sections. The idea that their littleness, or tare, will condemn them, I think will be found to be an error. I shall use 20,000 next season, and fully expect to increase the number the following season. In one apiary (of over 100 colonies, spring count) I shall use nothing else. As I said in a recent communication, I believe, when once on the markets generally, more thousands of these half-pound sections, will be used than of any other size. The present markets may not, as Messrs. Crocker & Blake say, demand very many half-pound sections, but these little cards of honey will, I think, not only fill a certain demand already existing, but increase that many fold. Let us see.

This year's numbers of the "Old Reliable," BEE JOURNAL are full of progressive articles. I sometimes get "too full for utterance," when reading them. I begin to think that after I am so old that my hair is white, (that is, the little row, just around above the ears), teeth all out, nose and chin nearly caressing, eyes retired a half inch, etc., that I shall try to tell the boys "how we used tu du," and where they will go tu, if they don't stop using so many new-fangled fixins." But I expect to stop when death gets me in his swath. I can not afford to "forever write," like Mr. Robinson.

But I would like to tell Dr. Tinker and G. M. Doolittle, why I believe their ventilation theories will be found to have little to do with successful wintering, when we get this branch of bee-keeping under our thumb, which I earnestly believe we shall soon do; and to tell William Roberts to put a little salycilic acid into the paste, the formula of which was given on page 25; also to tell S. F. Newman (page 26) why one of his apiaries has dysentery, while the other three have not, all being "prepared for winter in the same manner." Also to give R. Dart what I think to be much more efficient and easier manipulations for prevention of after-swarms than his, as given on page 39. I hope to get at an article on this subject before the season for practice begins.

I wish Mr. Isham (page 53) would send me a sample of his wood separator, and tell us through the BEE JOURNAL how he puts up with, or avoids the glue difficulty, spoken of above.

I want to say to D. Videto that since I wrote the "Cell by Cell" article, I have used the "brass clock wheel," and wooden wheels, but found still better, Mr. Root's button hook process of fastening wires to foundation.

I think we owe S. Corneil (page 69) a large debt of gratitude for his valuable article on "The Carbonic Acid Gas Question;" it contains just the information (seemingly beyond all successful controversion) that I most wish to know. For the sake of our own health, not that of the bees, for I feel that neither carbonic acid gas nor dampness, are, either or both, causes of dysentery, which I will try to show in an article on that subject which I will write as soon as this winter's experiments are over.

I am not a little surprised at Dr. Tinker's advice to set the sections down on the brood frames. We have been through that mill, graduated, and received our papers, and I therefore take the liberty to warn all beginners against violating the instincts of the bees, by doing any such thing. If they do, the bees will, with their glue and stings, punish them for it.

Before closing, I must say to Dr. Baker, whose lively literature is a pleasure to read, that, according to my experience, crosses between the brown Germans and dark Italians, are excelled by no bees known for their good behavior, and should not be called "irascible insects," while the term "*business* neighbors" is very applicable to them. I too enjoy the beautiful, but, to gratify this propensity, I would no more think of cultivating "beauty spots" on bees, than would the wood-chopper of paying two prices for a beautiful ax! I wish to use merely the best bees I can get, that will, with the least friction, most certainly procure for me the "filthy lucre," with which (after obtaining the necessaries of life) to beautify my home, my nine and sixty other possessions, before the abdomen of my bees. I am sorry the Doctor should advise such a dose, as a mixture of honey, eggs, blackberries and milk, as a panacea for poverty. "It won't do, Dr.; it won't do;" such prescriptions will not cure. I thank him for putting our side of the question ahead. I doubt not experience will keep it there.

Dowagiac, Mich., Feb. 2, 1883.

For the American Bee Journal.

The Compositæ, as Honey Plants.

L. H. PAMMEL.

Among the many flowering plants none are better adapted for honey and none are more profitable for bee-keepers than the various species belonging to the compositæ family; not only because they are productive in honey, but also because they are continual bloomers. A well-known example is the common dandelion, that starts to bloom early in April or May, continuing to bloom in favored localities until frost.

Tarexacum den leonie is very rich in honey, and, according to the observations of Sir J. Lubbock, the honey is so abundant that it rises quite a distance in the floret.

The dandelion, consisting as it does of a great many small florets, must necessarily bloom at different times; making it exceedingly productive, both in honey and pollen, for a long time.

The different species of *Tarexacum* are widely distributed throughout the world, and there is, perhaps, no portion of the United States in which the dandelion does not bloom with profusion. It is one of our earliest honey plants, and is certainly visited more frequently by bees than many other honey plants.

Honey bees are not the only ones that secrete their nectar, but on the authority of Herman Mueller, no less than 90 species visit it for this purpose.

Our various lettuces are valuable honey plants, the flower heads are smaller than those of the dandelion, and not so conspicuous, yet they contain an abundant supply of honey and are in bloom constantly from July to frost, especially our wild species, some of which are very common. I have found, at least, that wild lettuce was very common about Madison; less common is the prickly lettuce, but, as a honey plant, it is as good in all respects as the cultivated lettuce.

Closely allied to *Tarexacum* and *Lactuca* are *Hieracium*, hawk-weed, *Sonchus*, snow thistle, and *Nabulus*, rattlesnake root.

They are all late flowering plants, especially *Sonchus* and *Nabulus*. Although they contain an abundant supply of honey it is not sought so eagerly, on account of the abundant solidagos and asters, in which the nectar can be obtained easier; that is, the expenditure of labor is less.

Madison, Wis.

For the American Bee Journal.

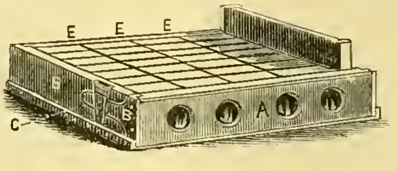
My Comb Honey Rack.

JOHN HODGSON, JR.

DEAR EDITOR—According to promise, at the Northwestern Convention, I send you a honey rack, with the following description of it:

The engraving represents a comb honey rack for sections with portable side and bottom board, to be used on the top of the hive. This case, A, being made to hold 28 sections 4¼x4¼x2 inches, without separators, is just 4¼ inches deep, without bottom board. B is the portable side held in its place by the V-shaped beveled wedges, C.

The honey board is composed of 7 slats, running from end to end, fastened together with a ⅞x⅜ strip across each end. The slats are one-half inch apart. The center board E, 4¼x⅞ inches, is to hold the sections squarely in place in the center. The section board is intended to take the place of a row of sections; when it becomes necessary to have the bees work only in a part of a set, one or more can be used.



To fill the rack with sections take the keys, C, out, and remove B, and place the sections in the rack on the honey board; then replace B, starting in the keys, C; put in the center board, E; press down the keys, C, tightening the sections as desired.

To get the sections out, when they are full, remove the keys, C, and take the rack from around the sections. If desired to examine the brood chamber, remove the rack, sections and honey board, all together, from the hive. Observation holes, in the sides, have glass placed in grooves in the inside of the rack.

Most of bee-keepers that have used it, advised me to have it patented, but I have concluded to give the invention to the bee-keepers.

Pewaukee, Wis., Jan. 16, 1883.

For the American Bee Journal.

How My Neighbor Winters Bees.

H. J. NORTHRUP.

Having seen so much in the BEE JOURNAL about wintering bees, I thought I would describe how Mr. O. winters his bees. About December 1st, or earlier, if the weather becomes settled cold, Mr. O. places boards on the ground along by a tight board fence. Placing the hives close together on these boards, leaving a space of a few inches between the row of hives and the fence, he raises the hives about ½ inch, by putting blocks under the corners of the hives; lays a narrow board, 6 or 8 inches wide, slanting against the front of the row of hives so as to make an air space; he then takes heavy paper, old carpets or blankets (paper is best), lays them on top of the row of hives, allowing them to hang down the front, near to the ground; lays boards, sticks, etc., on top, to keep the paper in place; fills in between the hives and fence with forest leaves or straw; places a layer of straw in front of the hives, with a wide board, laid on its edge, against the straw, to keep the straw from falling away; roofing the whole with old boards, or anything that will turn the water from the hives. In very cold weather he stops the holes at the ends of the boards, making the air space, and opens them when the weather moderates. Mr. O. tells me that he has practiced this method 12 years and has never lost a colony, that was in fair condition when put into winter quarters. I have practised the same two winters with equal success.

Lansingburgh, N. Y.

For the American Bee Journal.

Wintering, Marketing, etc.

WM. CAMM.

I put 57 colonies into winter quarters, with plenty of stores. The hives run for comb honey, had sections removed and quilt spread in the bottom of the honey rack, which was covered with dry wheat chaff, and the rack left on the hive. All hives were chaff-packed, then set side by side, on timbers, so as to raise the sills 5 or 6 inches from the ground, a pole laid on the top of the hives, and then corn fodder reared thickly on the north side of the hives, and thinly on the south side, except a few single-walled hives that were covered deeply on both sides.

I intended to say that I was selling comb honey at 25 cents, and extracted at 20 cents; but the "typo" got this statement reversed, or I made a mistake in writing it. It sells but slowly at these prices, though I have the sections nicely cleaned, allow net weight, and put the extracted, almost wholly clover honey, in neat and handy packages.

Cannot the Board of Railroad Commissioners do something about reducing the freight on honey from double the rates of syrup?

It is hard for a man to carry pure clover honey to the store and be refused 20 cents, when dark adulterated stuff stands before him on the shelves at 25 cents. The most discouraging thing in bee-culture is the low price of extracted honey, given in the papers. Discrimination is even made against candied honey, though candying is a certificate of purity, and nine out of ten like candied better than liquid.

Sometime ago a paper remarked, excusingly, that many worthy dealers, rather than face financial ruin, sold adulterated articles. It seems to me that we have as much right to avoid financial ruin as anybody; and putting the matter in the light of self-defense, it is hard to say who, or what class, should not be excused. We must look to legislation for a cure; but not to repressive legislation. Those who actually till the soil, pay so much, or more, every year, directly or indirectly, to get at the land, than would liquidate the national debt; this drives tens of thousands from the land into towns, cities, necessities and crimes; hence the trades and professions are over-crowded, while the avocation—agriculture—upon which all depend, primarily and ultimately, has far too few engaged in it; and those who follow it, instead of trying to make one acre produce double, are trying to get two acres where they now have but one. I only hint at the matters we must deal with, to suppress, or rather prevent, adulteration. There is no country in the world, perhaps, where laws are more stringent or better executed, especially with regard to adulteration, than in England, and yet we are told that London is the paradise of adulterators.

Murrayville, Ill.

[We think our correspondent is in error about London being "the paradise of adulterators." English laws against adulteration are very stringent, and well executed. We wish we could say this of America.—Ed.]

Translated from Illustrated Bienenzeitung,
by A. R. Kohnke.

The Giant Balsam as a Honey Plant.

PROF. DR. MUENTER.

Through the kindness of Mr. Renter, of Sanssouci (H. M. court gardener), the apicultural exposition of the Baltic Central Bee-Keepers' Association at Potsdam, in September, 1881, was furnished a specimen of the giant balsam. It is no new plant, but the attention of the bee-keepers was called to it then for the first time as a honey plant. Some few bee-keepers there, knowing the plant and its value, praised it so highly that Von Behr Schmoldow, H. M. chamberlain, was induced to try to cultivate it, with reference to honey-producing and hardiness. Having obtained a small quantity of the ripe seed, he charged his gardener with the raising of the plants therefrom. The seeds were planted in September, 1881, in drills, 1¾ inches deep and about 3½ inches apart. With only a light covering, they endured the winter well, and were transplanted in the spring of 1882, about 32 inches apart. At the beginning of September, the plants had attained the height of 6 to 8 feet, and were covered with many thousands of blossoms; and, without exaggeration, there was a bee on each, so that new comers would hardly be able to secure one, not in possession of some other.

Last September, small quantities of the seed were distributed among the members of the Horticultural Society of Pomerania, to raise as much seed as possible, of which the District Bee-Keepers' Societies will get their share, next year. Many plants have a reputation as good honey producers, but the giant balsam excels everything by far; the more so as it blooms at a time when there are but few other honey-yielding plants, and these furnish it in very small quantities. It will pay to raise it wherever possible. It blooms in August and September.

For the American Bee Journal.

Small Packages of Comb Honey.

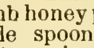
ARTHUR TODD.

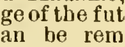
In my capacity as delegate to the International Exhibition of 1878, at Paris, for the apicultural interests of Algeria, I called upon Madame Jarrie, a leading box frame bee-keeper, living near Paris, and who has given her name to a certain style of hive used in France. Having explained the working of her hive to me, this lady proceeded to show me some of the results therefrom, and one exhibit struck me forcibly at the time, which the revived talk upon "small packages" recalls to my memory.

This exhibit was neither more nor less than a section about the size of a Harbison Californian section, divided by cross pieces of wood into six portions, each portion filled with comb honey. "This," said Madame, "is the comb honey package of the future; a single spoonful can be removed without causing all the rest to bleed, and smear everything it comes near." "But will it sell, put up like this?" I asked. "This is an article '*de luxe*,'" she replied; "and people will pay for that. I have sold all I had at 5 francs per pound ($1.00), and could have sold more, etc."

I went back to Algeria, and fitted up some Harbison sections in the same way—fitted in small pieces of white comb, and had them filled, and personally proved that it could be done without in the least altering the shape or size of the present "one" and "two-pound sections." I have thought out a simple plan for subdividing the same, and inserting the very thin comb foundation all in one operation. I hope, Mr. Editor, you will publish it and so prevent any patent claim being brought out later on upon the same thing.

To subdivide a section into four parts only requires four (4) pieces of very thin wood cut thus:





Two of these, interlocked, cut the proper size, and the ends touched with glue, are placed inside a section. Now, upon the cross, formed within the section by these two interlocked pieces, lay a piece of thin foundation, cut to the size of the section. Upon that again place two more of the pieces of wood, interlocked; the crossing of the wood of the uppermost will now press the wax down upon the crossing of the first pair, and the adhesion of the wax and the wood will be sufficient to keep all in place. I enclose four sample pieces, to illustrate my method, and it will be easily seen how the increasing the number of interlocking slits in the pieces of wood will increase the number of squares of honey in any section.

Philadelphia, Pa.

For the American Bee Journal.

Returning Swarms, Uniting, etc.

L. DENSMORE.

It was the poorest season for bees and honey that I ever knew, in over thirty years. The season opened wet and cold, and although there was plenty of white clover, it secreted no honey, and up to June 25th I had to feed some of my strongest colonies. In July, basswood opened, and such a rush for honey I never saw before. Colonies were strong in numbers; most of my Italians had nine full frames of brood and they were obliged to store their honey in boxes. I started with 27 colonies, increased to 41, and put back 8 swarms. The swarming lasted only while basswood was in bloom.

Some one was enquiring for a successful way of putting back swarms. Give them an empty hive and let them stand until just before night; look through the parent hive, cut out all of the queen-cells and shake the bees in front of the hive. Catch and clip the queen's wing, while returning; put on an empty crate of boxes, and all is right. I never had a swarm come out the second time. Care should be taken to keep plenty of room for surplus honey.

I had two colonies of black bees that would not try to defend their stores against robbers. They would let the Italians carry off their honey, so I pinched the heads of the queens and united them with an Italian nucleus, having an Italian queen, and there was no more robbing.

I have united by the onion process, and it is a success, every time. Give them the onions at least 36 hours before uniting. I have united colonies and nuclei, and, for experiments, exchanged queens from one hive to another, and from nuclei to black colonies with perfect success, usually leaving the onions in the hive, sliced up, 48 hours; and to make everything absolutely certain I gathered the dried bloom and seeds of catnip and used it for fuel in the smoker, giving them a good smoking after uniting. It leaves a strong odor of catnip. By this process I have never lost a queen, or had any fighting after uniting.

A portion of my Italians and my Holy Lands, crossed with Italian drones, work readily on red clover. My black bees (4 colonies) gathered no surplus and but one of them swarmed. One apiary of 70 black colonies, spring count, gathered but little surplus honey, and, as far as I can learn, but few bee-keepers in this section had any surplus honey. I got 1,500 pounds of nice box honey, and sold it for 20c.

per pound. I do not think I should have got one quarter of that amount with all black bees. Will the tulip tree furnish honey, here in the north, equal to the basswood, and is it as rich a grower and as hardy?

Livonia, N. Y.

[The tulip blooms in May and June and is a very ornamental tree, which sometimes grows to the height of 130 feet. In the South it yields honey profusely, but in the North it yields much less; the honey is not equal to basswood. It grows rapidly in deep, rich soil, after being transplanted when two years old. It is often called "whitewood."—Ed.]

SELECTIONS FROM OUR LETTER BOX

Balled Queen—Grape Sugar.

What is meant by a queen being balled, as spoken of in the Bee Journal, page 21? What is grape sugar made of? S. F. Miller.

North Manchester, Ind.

[When a queen is distasteful to the bees they cluster about her, and, unless she is released, they will sting her to death—that queen is said to be "balled." Sometimes she is balled by her friends to keep the enraged bees from her—then she is "balled in a friendly way," as mentioned on page 21.

Grape sugar is made from Indian corn; the solid is called grape sugar, and the liquid is named glucose. These are not as sweet as cane sugar or molasses.

You should get a manual, and "read up" all these things; then you can understand the more advanced apiarists.—Ed.]

Honey from the Spanish Needle.

My bees are doing well; they had a good flight on Jan. 24th and 28th. Every writer should say how cold it has been this winter. When we read what Mr. Doolittle and his neighbors say about their bees, we should remember that they live in New York State, and it will not do for us in the West to govern ourselves in the same way they do. I live 198 miles south of Chicago, where it hardly ever gets too cold for bees to remain out of doors. I think that in 1880-81 there were a few colonies that did winter-kill by a careless man who let his bees remain out on some bench on the north side of his house. Bad honey is all that we dread in this part of the country for wintering bees; that is, the honey that bees gather in the late fall and never cap over. It sours and will kill the bees. The coldest it has been is 12° below zero, but it only lasted a part of one day. Several mornings it was 10° below zero. We have had a very good winter, and our bees have the very best of honey. Our principal yield of honey is from the Spanish needle. Does it sell as well on the market as other honey? I have about 20 colonies to transfer; when is the best time to do it? They are all in good movable frame hives, but they have deep frames, and I use the Langstroth hive. D. R. Rosebrough.

Casey, Ill., Feb. 1, 1883.

[The honey from the Spanish needle will sell very well, especially if extracted.

The best time to transfer is in early spring, before there is much honey in the hives.—Ed.]

"Mason" Bees.

I send an insect, and wish to know what it is, and what its habits are. A miner discovered about half a peck of them some 12 feet in from the mouth of a coal bank. Do they usually inhabit such places? The men are much excited about them. Peter Sears.

Barnesville, O., Jan. 24 1883.

[The insect is one of the "Mason" bees, belonging to the genus *Colletes*. It is a member of the large family, the *Apiariæ*, of which the hive bee forms a conspicuous part, though its habits are quite different from the latter. No one, so far as I know, ever before found them in a coal mine, but their usual nesting, or home-making place, is in the ground, where they tunnel out, a foot beneath the surface, six or eight cells, some inches long and two-thirds of an inch in diameter, lined with thin, silken membrane and closed with a cap, like a drum head.

The bees gather pollen and have been seen in considerable numbers in the flowers of squashes, cucumbers, etc., but I do not know that they collect or use nectar. They are stingless and harmless little creatures, and seem to have little fear of harm to themselves, being slow in their movements and appear to make little effort to escape.—T. J. Burrill.]

My Experience in Wintering Bees.

I have 24 colonies in "Langstroth hives;" I changed 6 of them to doubled-walled chaff hives; the others had large boxes placed around them, and the spaces filled with chaff. The weather has been very cold for the last two weeks, and the snow had drifted entirely over some hives. I thought I had better remove the snow from the entrance, for fear they might smother. I found, in front of those packed in chaff, a large hollow space in the snow, which the heat from the bees had melted, and what bees had died were in front of the hive, on the ground. The chaff hives were not in as good condition; they had alighting-boards fastened in front of their hives, and as some snow had blown in and some moisture run out from the inside of the hive, the entrances were entirely filled with ice. I expected to find them smothered, as the air seemed to be entirely excluded, but they were all right, and the 24 colonies are yet all right. I think I have learned a lesson; there should be no alighting-boards in front of hives in winter, as ice will collect on it to the detriment of the bees. The entrances should be large with nothing to hinder the dead bees from falling to the ground. Bees properly packed in chaff will never perish from cold; if they fail to winter, it will be from some other cause. S. J. Youngman.

Cato, Mich., Jan. 28, 1883.

Experience of a Beginner.

A swarm came to me, a year ago last spring, and I hived them in a box hive. Last spring they swarmed and I had a frame hive all ready, but, not knowing how to manage to find the queen, we could not succeed in hiving them, and they all went off and hived themselves in another box hive, in a neighbor's yard. Now I have 2 colonies in box hives and I am at loss to know how to get the honey or what to do with them. Do you think it would be safe to take any of the honey away from them? They lived out doors all last winter and came out last spring very strong and full. I take the risk of leaving them out this winter, but how can I get any of the honey? Mrs. W. W. Smith.

Princeton, N. J.

[Next spring some of the honey can be taken in the old way, by turning up the bottom of the hive and cutting out a little near the bottom. The best way is to transfer them to a movable comb hive, in the way recommended in your bee-manual, for, of course, you have one. No one should think of getting along without such at hand to refer to at all times.—Ed.]

Winter in Kentucky.

The winter in Kentucky has been a very changeable one; the mercury frequently changing from 15° to 60° within 24 hours, and as often as 4 times per week, yet the bees apparently are wintering well. I have 90 colonies on the summer stands and think they will come through all right. J. T. Connley.

Napoleon, Ky., Feb. 3, 1883.

Bees are Wintering all Right.

The bees are all right; but they have had no flight since the beginning of November, now almost three months. There are very few dead bees on the bottom boards, not averaging over ¾ of a pint, per colony. This is now the tenth winter's experience for my system of wintering bees, and have not lost a single colony, all these winters in succession. This, I think, proves my system correct; especially when we take into consideration that we are 2,200 feet above the sea level, and that our winters are cold and prolonged. H. H. FLICK.

Lavansville, Pa., Jan. 31, 1883.

Thirty Degrees below Zero.

The weather is a little more comfortable now—still there is no thaw or rain—we have had nothing but dry, cold, snowy weather. On Tuesday, Jan. 24, at 6 a. m., the mercury was down to 30° below zero. How is that kind of weather for bees on the summer stands in box hives? If they live, cold will not kill them, will it? J. A. MORTON, M. D.

Bethel, Maine, Feb. 2, 1883.

King's Cure-all as a Honey-Plant.

I send you some pods of seed of a good honey plant. What is its botanical name? We call it "King's cure-all." It blooms a little on a single stalk, the first year; the next year it throws out branches, growing 6 or 8 feet high, and blooms about the middle of July, and continues blooming till frost. The flower is a small cup with a lid over it, keeping out the sun and rain. The bees work on it early and late. S. P. SOWERS.

Dunlap, Kansas.

[The plant seems to be *Scrophularia nodosa* ("Figwort," Simpson's Honey Plant). The fruit capsules are more densely produced than is common with the above species, but it cannot be far different, and there is no near relative known to me to which it may be referred. It is, probably, the variety known as *Marilandica*.—T. J. BURRILL.]

Catnip as a Honey Plant.

Since honey plants are of the utmost importance to successful bee-keeping, I would say that I agree with Mr. Ellicott (see page 69), as far as he goes, about catnip. We have, in our city and vicinity, quite a good deal of catnip growing. Three years ago I gathered some 6 lbs. of seeds and sowed it on waste places, and I noticed bees working on catnip all-day long, and if they found no honey in it, they would not visit it. Should I ever need to plant much for honey, I would plant considerable catnip. H. S. HACKMAN.

Peru, Ill., Feb. 6, 1883.

Medicinal Qualities of Honey.

I was much interested in an article in the BEE JOURNAL of Dec. 27, page 818, from Mr. Luther Corey, of Yorkshire, N. Y., in regard to the medical qualities of honey. The thought suggested to me was, that honey taken from different kinds of flowers does not contain the same medicinal qualities. As physicians use the roots, bark, leaves and flowers of different kinds of honey-producing plants, shrubs and trees, and each kind for a different disease, so may the honey taken from each kind of plant, shrub or tree, be a better medicine for some one disease than for all diseases. The buckwheat honey may be a better medicine for one kind of sickness, while that taken from linden will be better for some other kind, and so on, with all the different kinds of honey. I think if we will be careful to keep the different kinds of honey separate, and place it in the hands of medical and scientific men for investigation, it may result in good to producer and consumer. NELSON PERKINS.

Princeton, Ala., Feb. 3, 1883.

Bees have the Dysentery.

Please answer through the BEE JOURNAL, "what must I do to save" my bees? They have the dysentery, and are wasting away very fast. I fear they will all die. I should like to know from bee-men if there is a remedy? It is a general complaint about here. I have been watching the BEE JOURNAL for a remedy, but have not noticed anything yet. I have 40 colonies, 9 in box hives. They all appear to be alike afflicted. B. HELPHREY.

Utica, O., Feb. 3, 1883.

[Give the bees some good capped honey, over the frames, and a cleansing flight as soon as the weather will permit.—ED.]

Bees Confined 80 Days, but Doing Well.

My bees are doing well; they have been in winter quarters 80 days, and each colony has eaten from 1 to 3 lbs. of honey. I weigh them every month; the comb in some of the hives is getting moldy; is it injurious to them? F. A. GIBSON.

Racine, Wis., Feb. 8, 1883.

[Mold is not injurious to bees; leave it to the bees, and when the weather will permit, they will surprise you by their dexterity in cleaning it up.—ED.]

The California Apiculturist.

Has the *California Apiculturist* ceased to exist? I have received no number of it since November, 1882! K. ERCANBRACK.

Watsonville, Cal., Feb. 1, 1883.

[As we have not received it since November last, we expect it has been numbered with the *dead* bee papers—and "their name is legion."—ED.]

The Winter in Canada.

We have a very severe winter, with many storms, but, to my mind, it is the best winter I ever saw for a good honey season to follow. There being no frost in the ground, the grass and wheat are growing under the snow. Last year, there being no snow, the ground was frozen everywhere; what was left of white clover was very weak or came from seed the previous summer. Upward ventilation is entirely contrary to my reasoning, and the instinct and practice of bees. The first thing every swarm does is to plaster every crack except the entrance, which is always below the comb. But whoever heard of bees removing the propolis to cause a draught through the hive for winter. I am satisfied upward ventilation is wrong; I have studied it for 3 years, and I fail to reason out such treatment. People even in Montreal (which is about the same as Dakota or Manitoba), winter bees safely, leaving the top well sealed and raising the hives ½ inch from the bottom board. CHARLES MITCHELL.

Molesworth, Ont., Feb. 2, 1883.

What to Plant.

My bees, are to all appearances, wintering finely. I put into the cellar on Nov. 2 and 3, 176 colonies of my own, and 1 belonging to a friend, all Italians. I have made arrangements to start another yard in the spring, about 6 miles from here. I have bought 80 acres to sow for honey and I would be thankful for your opinion as to what is best to sow, all things considered. It is low land, that overflows about 2 out of every 3 years. There is lots of basswood, and all kinds of timber, close by; such as soft and hard maple, willow, elm, box elder, etc., with high bluffs within one mile on the north or south, covered with goldenrod and various other flowers. I intend to make bee-keeping my future occupation and I want to start right. From what I have seen of sweet clover and motherwort I think they are well worth cultivating for honey. I believe that to get the right kind of bees is no longer a question; all that is required is to carefully breed from those containing the most desirable qualities. I do not allow drones to fly from any hive that does not come up to the highest standard. I kill all queens that produce one or two-banded workers, or very cross ones, and replace them with good ones. WM. LOSSING.

Hokah, Minn., Jan. 30, 1883.

[Sweet clover is the best honey plant we know of, for such a location.—ED.]

Iowa State Convention.

I second Mr. Sorrick's motion for a "Bee-Keepers' Convention" to organize a State Association, during the Fair week. Allow me to suggest that Mr. Sorrick issue a call for said meeting. If those interested in bee-culture will indicate, to the board of directors, the classification and amount of premiums for this department, I have no doubt it will receive a favorable consideration, as they are ever ready to lend "a helping hand" to develop any interest that is a benefit to the citizens of our State. E. R. SHANKLAND.

Dubuque, Iowa, Feb. 5, 1883.

Syrian Bees.

The new Monthly BEE JOURNAL is here, and a neater, more beautiful, well-printed monthly we never have seen. It glows with rich contributions from the best writers on scientific bee-culture. I notice in the Weekly BEE JOURNAL, page 59, a desire to know the markings of Holy Land bees. If the writer ever has any occasion to manipulate them, it will not be difficult to identify them, for they will be very apt to make a lasting impression, never to be forgotten, for they are more treacherous than a Modoc Indian; the minute you open the hive they hoist the black flag, and start on the war path. They are good honey gatherers, and go upon the principle "that he who does not look out for his own household is worse than an infidel." They are as quick as lightning. I am glad that the BEE JOURNAL is talking to so many bee-keepers in the world; some of the old fogies are getting the scales from their eyes and are discarding brimstone to some of the most useful insects that a wise creator ever bestowed.

F. H. FINCH.

Sharon Centre, O., Feb. 1, 1883.

Frost in Bee House.

I looked at my bees yesterday, and they are all in fine condition. I have them in a bee house; the thermometer has stood between 26° and 34°, all winter. There is hoar frost in the inside of the house, all round, will it do any harm, when it gets warm, to melt the frost? Would it be good to sweep off the frost of the walls and sweep it out? Would the sweeping annoy the bees too much? I have chaff cushions on. Please let me know through the BEE JOURNAL.

GEO. KEMP.

Navan, Ont., Jan. 27, 1883.

[The only remedy we can suggest is to raise the temperature. Had it been kept at from 40° to 45°, as we have so often advised in the BEE JOURNAL, the frost would not have invaded your bee-house. To remove it now, by sweeping, would cause a disturbance, and when it melts it will create some dampness, and the result may be detrimental to the bees.—ED.]

A Request.

In one of Mr. Doolittle's invaluable articles on "Producing Comb Honey," page 229, he says: "The old colonies losing their queens by their going with the new swarms, are allowed to rear their own queens, as (after thoroughly trying the plan of) giving each colony a laying queen immediately after swarming, has not proven a success with me." I respectfully ask Mr. D. to favor us with some particulars on this point, and the reason why the plan was not successful.

J. W. MERIFIELD.

Penn Yan, N. Y., Jan. 24, 1883.

Bees in Cellars all Right.

I have devoted considerable time today in looking over the last volume of the BEE JOURNAL. I have it all bound together, and prize it very much for future reference. We are having a severe winter, especially since the new year began. The thermometer has been to zero and below, nearly every day during the past month; and it has been down as low as 32° below. Some are losing their bees, where they are not protected. I have mine in the cellar, and all seem right except one, which shows some signs of dysentery. The temperature of the cellar is 40°; is that too low?

J. W. SANDERS.

Le Grand, Iowa, Feb. 2, 1883.

[We prefer to have the temperature above 40°; that is the lowest limit for it; keep it above that.—ED.]

Bees Wintering Finely.

I like the BEE JOURNAL very much; indeed, it has become a necessity, and I would hardly know how to get along without it. My bees are wintering finely, notwithstanding the extreme cold. I have all but 7 of mine in the cellar; 45 in all.

DR. H. J. SCOLES.

Knoxville, Iowa, Jan. 25, 1883.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

New Catalogues and Price Lists.

The following new Catalogues and Price Lists are on our desk:

Bees, Queens and Apiarian Supplies—Dr. J. P. H. Brown, Augusta, Ga.

Bee-Keepers' Supplies—Alfred H. Newman, 923 West Madison Street, Chicago, Ill.

Italian Bees—Rev. E. L. Briggs, Wilton, Iowa.

Apiarian Implements, Italian Bees and Queens—Paul L. Viallon, Bayou Goula, La.

Bee-Keepers' Supplies—Chas. F. Muth, 976 and 978 Central ave., Cincinnati, O.

Bees, Queens and Bee-Keepers' Supplies.—E. T. Flanagan, Belleville, Ill.

Seed Catalogue.—Vanderbilt Bros., 23 Fulton St., N. Y.

Italian Bees, Queens and Apiarian Supplies.—James B. Mason, Mechanic Falls, Me.

Apiarian Implements.—L.E. Welch, Linden, Mich.

Bee-Keepers' Supplies.—Merrian & Falconer, Jamestown, N. Y.

Implements for the Apiary.—Chas. J. Van Eaton, York, N. Y.

Bees and Queens—W. A. Hammond, Richmond, Va.

☞ Mr. A. E. Manum, Bristol, Vt., has sent us samples of one-pound, two-pound and half-pound sections. They are made of white wood, and the workmanship is superb.

Convention Notices.

☞ The Union Bee-Keepers' Association will meet in Grange Hall, Eminence, Ky., on Thursday, April 26, 1883. All bee-keepers, and the public generally, are invited to be present.

G. W. DEMAREE, *Sec.*

Christiansburg, Ky.

☞ The Texas State Bee-Keepers' Association will hold its Fifth Annual Convention at McKinney, Collin Co., on Tuesday and Wednesday, April 17th and 18th, 1883; at the residence of Hon. W. H. Andrews.

WM. R. HOWARD, *Sec.*

Kingston, Texas.

☞ The next meeting of the Haldimand, Ont., Bee-Keepers' Association will be held at Nelle's Corners on Saturday, March 31, 1883, at 11 a. m.

H. CAMPBELL.

☞ The Western Bee-Keepers' Association meets at Independence, Mo., April 28, 1883.

S. W. SALISBURY, *Sec.*

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

☞ Articles for publication must be written on a separate piece of paper from items of business.

OLDEST BEE PAPER IN AMERICA

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THE AMERICAN BEE JOURNAL

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THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR,

A Severe and Cruel Winter.

The snowstorms, blizzards and very severe weather of the past five or six weeks, has now given way to a less rigorous atmosphere, accompanied with rain, and the results are, destructive floods and inundations all over the country, by the rapid rising of the great rivers and their tributary streams. The reports for weeks have been about delayed and blockaded trains, terrible snow drifts, with the temperature so cold that steam could not be maintained, and hundreds of men and thousands of animals have perished. Now, the song changes—of those animals that are left many more are drowned with inundations, and men are robbed of their habitations; thousands being made homeless and destitute.

This state of things not only obtains in America, but also in Europe. England has been visited by storms more severe than for many years; her coasts have been lashed with the furious waves; many of her stately oaks and pleasure bowers have been leveled to the ground, and much of her shipping has been destroyed. On the European continent, floods and storms of unusual severity have destroyed and laid waste many large tracts of country, and the cry for help from those made homeless and destitute, ascends to Heaven from thousands of those who, before this calamity, were in pleasant circumstances.

One of our exchanges, speaking of the terrible disasters thus far, asks: "Is 1883 to be a year of calamities?" Well, surely, it seems already to have made a terrible record in that line, including fires, floods, snow-blockades, sleet-storms, blizzards, shipwrecks, train disasters, financial failures and earthquakes.

Of course, the bees have suffered as well as other stock. For nearly two months, here in the North, those wintered on the summer stands have been imprisoned by storm and tempest; and, finally, their hives were enveloped in an icy winding-sheet, or else carried away on the wild waste of waters, and the poor bees drowned by the mad element, if they still survived the rigors of the Northern wintry blast.

In some places, disease has set in, and many may yet die of that fearful bee malady—dysentery.

This winter will try, to the utmost, all kinds of out-door wintering. What the final results may be, can, as yet, only be conjectured. Those in more favored localities, where the floods have less power, will be able to have a "flight" soon, and the threatened damage by disease may be averted.

Many already have asked us, What effect all these troubles will have on the bee industry? We reply: Just the same as it does on the farmer, manufacturer, merchant and stockmen. The floods have destroyed the stock of thousands of merchants, stopped the "busy wheels" of manufacturers, and carried away thousands of dollars worth of their property. Will they become discouraged and give up? No! with redoubled energy they will start anew and retrieve their losses!

Because the storm king has destroyed thousands of vessels and many cargoes, will the mariners forsake their calling? No! but with dauntless courage they will pursue their labors and bid defiance to the elements.

Mr. L. James, on page 111, says that the fruit trees, in his neighborhood, are nearly destroyed, and the outlook for fruit is discouraging. Will the fruit culturist cut down his trees, "cast them into the fire," and look for some business that has no drawbacks? No! he will plant again, watch, cultivate and hope for the best!

Millions of acres of land, by the recent inundations, have been robbed of fences and buildings, and many winter crops destroyed—will the farmer cease to plow and build barns and houses for his cattle and herds, and repair the damages? No! To-morrow's sun will illumine the skies, earth will smile in gladness; her fields will soon be covered with verdure, and her gardens with flowers; luscious fruit will gladden the heart of "the sons of toil," and fill the pockets of those whose dauntless courage impels them to labor for the desired end!

The bees have been compelled to *fight for existence*, with disease on the one hand, and winter's fiercest blizzard, ending in floods and tempests, on the other. Is it any wonder that, in this unequal contest, they have suffered to a greater or less extent, governed by their location and the surroundings, together with the care and protection afforded them by their keepers? Instead of being discouraged over the situation, we should feel that our sympathies are needed by the poor bees, who have been thus tortured, and beset on every side with warring elements in a mad career of desolation. We should admire their pluck, energy and endurance, instead of being cowardly enough to try to find an entrance for ourselves to that *dungeon* over whose portals are written the stinging motto—"Blasted Hopes." There are no such words as "blasted hopes!" in the vocabulary of men of true worth. Reverses only stimulate "progressive men" to further diligence.

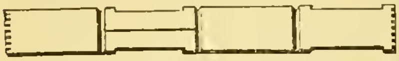
When the fruit grower, the farmer, the merchant, the sailor and the manufacturer become discouraged and "give up the battle," it will be time enough for the bee-keeper to *think* about being discouraged! *Until then.*

give no heed to such a bugbear as "Blasted Hopes," but, by perseverance, pluck and energy, *hold on*; for the average years, for bee-keepers, make as good a showing for "bees and honey," as for any business a man can engage in.

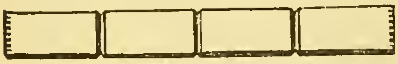
The Forncrook Patent Section.

The following, from Mr. Baldridge, is due as a correction, concerning the illustrations given in his previous article on this subject:

I regret exceedingly to find the wrong cut used in the fourth illustration, on page 72, in my article on the Forncrook Patent Section. The following cut



is the one used, which correctly represents the section covered by the Forncrook patent; the one I desired to be used is the following:



which shows a one-piece section without the recesses or passage ways for the bees, and likewise without the "longitudinal groove." This style of one-piece section is public, and not private property; so are all sections having 2, 3 or 4 pieces. The one-piece section, having a top as wide as the sides, and a bottom so narrow as to give ingress and egress to the bees, is also public, and not private property; in other words, there is no style of section, whether in one, two, three or four pieces, that is private property (that is, covered by a patent), except the one style made precisely like the section shown in the first cut in this article. Now, I trust the explanations will not be misunderstood.

In the preparation of my article, as it appears on page 72, I did not dream that an enigma would be attached thereto, to wit: That the one-piece section was invented by Mr. Forncrook, that it has been patented to him, and that it would be dishonest and fraudulent to evade said patent. At this date, I have no proof that Mr. Forncrook was the first and original inventor of the one-piece section "of any description," nor that his patent covers anything of the kind; nor that it is wrong, dishonest or criminal to evade anybody's patent, by making what is or should be public property? What right has Mr. Forncrook or any one else to frighten bee-keepers, by threats or otherwise, from making, using or selling property that already belongs to them? Why should bee-keepers pay a tribute of $1 to $2.50 for each 1,000 one-piece sections to Mr. Forncrook, on what is public property, or on what they have a perfect right to get elsewhere at lower figures?

M. M. BALDRIDGE.

We desire neither to add to nor take from our editorial note, appended to Mr. Baldridge's article, on page 73. We believe the position there taken is invulnerable. The patent has been issued to Mr. Forncrook, and that, too, after a prolonged and tedious fight. As to its invalidity, let the courts of law decide, as is suggested in the following from Prof. Cook:

DEAR MR. NEWMAN:—I send you the following article which I wrote to the N. Y. *Tribune*, and I hope you will give to our friends in the AMERICAN BEE JOURNAL:

Perhaps no class has suffered more from imposition in reference to patents than bee-keepers. The whole art, as practised to-day, rests on the use of inventions. Take away our hives, sections, extractors, and foundation machines, and apiculture would be bereft of all that gives it prominence. Unscrupulous persons may invent attachments to some of these valuable instruments, which attachments may be wholly worthless, and, in combination with other inventions which have long been in use, get a patent. Then by threat they induce those who use the article, often with their invention wholly omitted, to pay them money.

The sale of the Mitchell hive and the collection of money by threats of prosecution, extensively carried on by its inventor, illustrates the point, and it seems to me that we have just now a case exactly in point in reference to the one-piece sections. I know of several dealers who sold from 1,000 to 500,000 of these the past year. Now, if bee-keepers are forced to pay $6.50 or $7.50 per 1,000, when, with no patent hanging over us, $4.50 per 1,000 would be deemed a good price, we see a serious wrong is committed, unless, forsooth, the patentee has a clear right to his claim.

In 1877, I used one-piece sections with transverse cut to enable me to bend them, with a recess on one side cut by a chisel, made U-shaped. At the same date, many were selling dove-tailed sections with a longitudinal groove in which to insert foundation. In 1878 Mr. Lewis, Watertown, Wis., made one-piece sections, with oblique transverse cut, the recesses such as I made the previous year, and longitudinal groove. May 19, 1880, James Forncrook, foreman in Mr. Lewis' shop, applied for a patent on just this style of section. The patent was secured.

In a prosecution of Mr. Lewis for infringement in the summer of 1881, Mr. Forncrook, at first, as I understand, failed to make a case, but, upon a rehearing, won on the ground of the recess, on the side of the section, which permits the bees to pass up into the section. These recesses I cut one year before they made the section at all. Now, as I understand Mr. Forncrook's patent, it is a combination. Unless a section is in one piece, with oblique transverse cuts, the longitudinal recess, and the longitudinal slit for foundation, it does not infringe on his patent. Omit any single feature and we do not trespass.

Practical suggestions: Believing that Mr. Forncrook has no rights in this matter, I suggest that a friendly suit be brought to test the question. Each bee-keeper who uses sections can afford to pay $1 to bear the expenses of the suit, and then save much money. Again, if I understand the matter, any one can manufacture a one-piece section, with the recess and transverse cuts, if he only omit the longitudinal groove, which is really of no importance, and run no risk at all. I can see no equity in our paying $2 or $3 for every 1,000 sections that we use to Forncrook, when he really has done nothing to give us this important invention.

A. J. COOK.

Lansing, Feb. 6, 1883.

Prof. Cook's "practical suggestion" is a good one, and is the only *honorable* way to test the matter; that is, by a friendly suit to decide it, in a legal way. Until it *is* decided, however, by legal means, an *evasion* of the rights of the patentee is a *crime*, recognized by law as such.

We do not propose to occupy many pages of the BEE JOURNAL to discuss a matter which must be decided by law; we will, however, give the following, from Mr. E. J. Scofield on the subject:

I have just read the opinion of M. M. Baldridge, on page 72 of the BEE JOURNAL, in which he desires to set aside the patent of James Forncrook, or dodge it in some way. The two-piece section is, I think, a gross infringement on the Forncrook patent; it may not be in the eye of the law, but, nevertheless, it is a piece of wood for storing surplus honey, with transverse angular grooves, to be bent together in the manner of the Forncrook section, with the fourth piece to be dentated at both ends. He leaves out one of the transverse angular grooves in the patent section; otherwise it is an exact copy of the patent section. I am no lawyer, but I like to see honor and justice bestowed, where it is due. A section is being manufactured now, exactly like the one illustrated by Mr. Baldridge, at a lower price per thousand, but I prefer the one-piece, for two reasons: First, it is a handsomer package than the two-piece one, and it is stronger. Secondly, I would not use the two-piece section and thus encourage its manufacture. I was all through the factory where this section is made, as well as through the factory where the Forncrook section is made, about two weeks ago, and talked with the proprietors of both establishments. The proprietor of the two-piece box admitted that the two-piece section was intended to evade the Forncrook patent. James Forncrook has spent both time and money to secure what was rightfully his, in the first place, as all bee-keepers well know, who have read the BEE JOURNAL for the past five years. I will copy the following from page 10 of Forncrook & Co.'s price list for the year 1880:

"A word of explanation. As bee-keepers, no doubt, think it a little strange that we advertise and claim to be the inventors of the Boss One-Piece section, heretofore called the Lewis section, we think it necessary to explain the situation. I worked for G. B. Lewis, and Lewis & Parks, as their foreman, for the past 11 years, and in the spring of 1878, I invented the Boss section. On the first of October, 1878, the co-partnership of Lewis & Parks was formed, and they, thinking it a good thing, made an application for a patent without my knowledge or consent, thinking to get a patent before I would know it, and then let me whistle. I mistrusted what they were up too, but said nothing to them about it, but wrote to a lawyer in Washington, asking him if there was any way to find out? He wrote me that the only way to find out and prevent them from getting a patent, was to make an application myself. I made an application and found that they had also, and would undoubtedly have had a patent allowed them in a short time. Then it was put into interference, and we had to prove who was the inventor, which I proved to the satisfaction of the Examiner in the Patent Office, and the commissioner of patents awarded me priority of invention March 12, 1880. Now, after they find they cannot get a patent, they are trying to prove that it is an old thing, and not patentable. I will leave it with bee men to judge whether it is new or old. I propose to have a patent on it now, as it has gone so far, but probably I should never have applied for a patent if Lewis & Parks had not tried to beat me out of it.—JAMES FORNCROOK."

Now, I think it is our duty, as bee-keepers, after all that has been done about it, not to encourage an infringement; if the one-piece does not suit us, let it alone, and use either the dove-tailed or nailed sections. I used to manufacture dove-tailed and nailed sections for my own use and my neighbors at $8 per 1,000; I have the machinery now, but will make no more; for I shall use the one-pound, one-piece section as long as I can get it, made of white basswood, planed and sand-papered on outside and edges for $6 per 1,000.

I have no axe to grind; no interest in bee fixtures of any kind; Forncrook & Co. are no personal friends of mine; I never saw them until about two weeks ago, when I went there to see about getting supplies, etc., for the coming season; but when I see a fellow bee-keeper, as Mr. Forncrook is, in danger of being defrauded of his rights, I want to let my fellow bee-keepers see how it looks to me.

E. J. SCOFIELD.

Hanover, Wis., Feb. 3, 1883.

To the above may be added the following, which takes still another view of the matter:

I know the BEE JOURNAL is not published for the discussion of patents in general, but the article from Mr. Baldridge, on page 72, may mislead, and needs correction. Any person making use of a patented invention, in whole or in part, without the owner's consent, is infringing, and lays himself liable; even if a person wants to make an article for his own use, it is not allowed, and a patent cannot be evaded by simply leaving off a portion of the invention, as stated by Mr. B. If it could, our patent laws would be no protection to an inventor. I think the two-piece section is an infringement on the Forncrook patent, but the question is: Can the Forncrook patent be lawfully sustained? I think not. Mr. A. I. Root, on page 98 of *Gleanings*, 1882, says: "Before us is a copy of a patent, granted in 1874 to H. W. Hutchins, East Livermore, Maine, for a plan of making boxes of one-piece of wood, precisely like the Forncrook sections, even to the V-shaped groove, dove-tailing the ends, and all. The drawings make it so plain that it is difficult to conceive that Forncrook's was not copied from it."

I am not personally acquainted with the party manufacturing one-piece sections; but I endorse what the editor says on page 73, that the inventor is entitled to a reasonable reward for bringing the section to the present state of perfection, but I do not like his advance on the price of sections over what others can make them for, just because he has a patent on them.

A. J. HINTZ.

Lamont, Ill.

The assertion that the price has been increased since the issuance of the patent, is not sustained by the facts. By consulting old price lists, on file in this office, we find that they were sold before the granting of the patent at from $1 to $2 higher than the price now asked by the patentees, and at the same time they are made vastly better.

Before the patent was issued we were summoned by Messrs. Lewis & Parks before a commissioner, directed by the Patent Office, and for 3 days we were questioned and cross-questioned by opposing lawyers, and did all we could to defeat the patent. With all the facts obtainable, the patent was issued, and now should be respected by all law-abiding citizens.

There are points in all four of the communications that we do not approve, but it is unnecessary to state them—the whole matter must be decided by the technicalities of law, and it will be useless for us to *discuss* a thing we have no power to decide. "To the Law and to the testimony," must the appeal be made—that is authority, decisive and final.

* * *

Special Notice.—We will, hereafter, supply the Weekly BEE JOURNAL for 1883 and Cook's Manual in cloth for $2.75, or the Monthly and Manual in cloth for $1.75.

The Queen that Did Not Come.—In the Weekly BEE JOURNAL, page 54, Mr. O. E. Cooley, while trying to prove that "bees move eggs from one cell to another, mentioned the fact that he had been waiting for a queen for three years from Mr. Alley, but it did not come." This allusion to a business transaction, so woven into the article, passed unnoticed till it was published. In justice, now, we admit the following from Mr. Alley:

MR. EDITOR:—Please allow me space in the BEE JOURNAL to say, in reply to the article of Mr. Cooley, that his claim has long been in dispute. I am not satisfied that he did, or did not, send me the $3 he claimed. However, rather than do him an injustice, the amount was sent him sometime before his article appeared in the JOURNAL.

HENRY ALLEY.

Wenham, Mass.

The BEE JOURNAL has nothing to do with settling disputes over business complications, and we hope not to be troubled with any more of such.

☞ Many bee-keepers, as well as thousands of others, have been swindled by some bogus "brokers," hailing from this city. It is the old "confidence game" played over again. Some of the "certificates" have been sent to us, asking if we can collect anything on them. Of course, they are worthless, and we would, again, warn all our readers against sending money to irresponsible persons, for anything whatever. The parties we refer to have been doing [a cheating] business under the names of Flemming & Merriam, R. E. Kendall & Co., Charles J. Henri & Co., Cudworth & Co., and Bennett, Koltzman & Co. The principal man, Flemming, has gone to Canada with many thousands of dollars of booty.

Size of Standard Langstroth Hive.—Since reading the article on the standard Langstroth hive, I have made considerable inquiries, and I can find no two factories making them of the same dimensions. If there is a standard size it ought to be duplicated and everywhere used of the same size.

CHARLES NORRIS.

Traverse City, Mich.

It is to be deplored that so many will vary the size of a frame or hive from the standard size, just for a simple notion. It is high time for a reform to be made in this particular, and a standard size of frame be adopted and unvaryingly adhered to.

* * *

☞ Several catalogues are received, but, our pages being crowded, notice of them is deferred until next week.

CORRESPONDENCE

For the American Bee Journal.

Run for Right Race of Bees.

That coming bee, we want to see,
  Coming to near perfection ;
Of true specific, scientific,
  Well-devised selection.

In choice of kind, and use of mind,
  In age of vast progression ;
'Tis now behooved, to have improved,
  Yet genuine succession.

That bee that we, can all agree,
  Shall come to be the leader ;
Take all the sorts, home and imports,
  We pray, great chieftain breeder.

Italians bright, may well delight,
  Gold dollars indicating ;
Then strong, plain blacks with well-filled sacks,
  Deserve not underrating.

Smart Cyprians, too; wonders may do,
  Of vast, prolific nature;
And Palestine may much combine,
  Of extra valued feature.

Albino pure, or, not so sure,
  Cross'd, mix'd, or various races;
From all select, to main effect,
  Suited to sundry places.

Knowing and wise; study, devise,
  To have petition granted ;
And being about, beyond a doubt,
  The special bee that's wanted.

To winter live, and summer give,
  Large stocks and lots of honey;
Pure nectar piles, and fancy styles,
  Denoting piles of money.

Breed beauteous rings, and gentle stings,
  But, long and short, that's of it;
All else aside, the strain provide,
  That's bound to bring the profit.

When ye succeed, to meet the need,
  Canadian or ye Yankee;
The race well run, the prize is won,
  Apiarists all will "thank ye."

Toronto, Canada. S.

For the American Bee Journal.

Eggs or Larvæ, Which?

G. M. DOOLITTLE.

On page 54 of the BEE JOURNAL, for the present year, Mr. O. E. Cooley tells us that bees remove eggs from one cell to another, and then states why he believes they do so, giving the negative side as proof of his position. There are other ways by which the colony might have obtained a laying queen, besides the one he gives, such as a queen entering the wrong hive, or a small swarm with a queen, going into it, etc. ; but, as that is not the object of this article, I will not go into detail.

He says the "bees must have moved *an egg*;" I take it for granted that, if the bees moved anything, *it was a larva*. That bees do sometimes remove eggs I admit, but they are not apt to do so, where there are larvæ at their disposal, as there was in the case given by Mr. Cooley.

To illustrate: A few years ago I had a colony which was "bent on swarming," and I was equally "bent" on their staying where they were. They had come out twice, and I had put them back, cutting out the queen cells each time. After staying five days they came out again, and while they were out, I cut out all the queen cells, queen cups, and everything I could find that might look like an embryo queen cell, when they returned. When about half of the swarm had entered the hive, out came two swarms from other hives, and instead of alighting, they simply passed out of their hives and went in with this returning swarm. As the queens to both of these last, had their wings clipped, they were returned to their old hives, and the bees allowed to stay with those I had determined should not be hived as a separate swarm. I put on extra surplus room, so that the three swarms could work to advantage, if they saw fit so to do. However, they did not "see fit," for at 10 o'clock the next morning, all came out in the shape of a rousing swarm (three swarms in one), and so I concluded to give them an empty hive. Upon going to the old hive, I counted more than 250 queen cells, upwards of 50 of which had larvæ in them. More than 25 had eggs in them, which were all but one or two deposited there by the queen ; those one or two being carried there by the bees. The larvæ, which were transferred, were from one to four days old, I should judge by their appearance, and were plentifully supplied with royal jelly.

I could give several other instances where larvæ have been removed for queen-rearing. Where bees have access to both eggs and larvæ, and a removal of either is considered necessary, my experience proves that they nearly always select a larva ; this being in accordance with the accomplishment of their object, which is to get a queen in the least possible time.

Borodino, N. Y.

For the American Bee Journal.

Clipping the Wings of a Queen.

G. W. DEMAREE.

At the close of each volume of the BEE JOURNAL, when it has been arranged and bound in convenient book form, I find it quite entertaining to review its pages and note what has been established as truth, and what still remains theory. The well arranged index at the close of the volume makes this a very easy and pleasant task.

To the readers of the middle and southern sections of our country, the subject matter pertaining to the wintering of bees, is simply colossal in magnitude, enough to make the "head swim." My insatiate greed for "bee literature," however, has induced me to wade through the whole of it, cellars, chaff, sawdust, pits, caves, clamps, *ad infinitum*. Just think of crowding the little fellows so closely that their legs stick out of the doors and windows. It occurs to me that if there is no cases of bee murder, there is much involuntary bee slaughter going on in many parts of the country.

But, at this time, I wish to notice the well-nigh universal practice of clipping the wings of the queens. In all of volume 18 not a single voice except the emphatic protest of Mr. James Heddon, as reported in the proceedings of the Michigan Convention, has been raised in defense of the inalienable rights of the proudest and grandest of God's little creatures—the queen honey-bee. Mr. G. M. Doolittle says that "wings are created to fly with ;" yes, but is that all? Are they not a "cover" to her body, her beauty and her glory? If there was nothing but the merest sentimentality in the objections I raise to the wholesale chopping off of the wings of beautiful queens, the plea of Prof. Cook, Dr. Miller and others that they could not keep bees without clipping the wings of the queens, is sufficiently "set off" by the success of Mr. Heddon and others who do not clip the wings of their queens.

One of the defects of our bee literature is, that each writer sets forth his dogmas as though his locality and surroundings were the same as every other place on the earth. I think I can see why Mr. Doolittle can get along with clipped-wing queens, and also, why I and others operating in a different climate to his, cannot get along so well with them. From long obsevation I have found that bees never supersede their queens during the period which intervenes between the time breeding ceases in the fall and its commencement in the spring, and they rarely ever supersede them during the early and late honey harvests, simply because, in the latter case, an attempt to do so always results in a swarm. Of course, queens sometimes die during those periods, in which there is no inclination on the part of the bees to supersede them.

Well, in a climate like ours, there is generally a period of about six weeks, say from the middle of July to the first of September, in which the dry hot weather parches the flowers, and the bees find but little to do in the fields, and being strong in numbers they are ready to cut all sorts of fantastic tricks. They will learn how to cut holes in the quilts, nibble away at the furniture in the hives, cut to pieces sheets of foundation, "ball" and supersede their queens, especially if the queens are getting old, or are maimed in any way. I do not remember of ever having had a queen to survive two whole seasons whose wings had been cropped in the usual way.

Better success, however, can be had by trimming the inside of one pair of the queen's wings, preserving the original shape of the wings, taking off just enough to bring the queen down when she attempts to fly. I now have a queen, of good old age, whose wings were trimmed in this way when she first commenced to lay. To perform the operation, you pick the queen from the comb on which she is found, holding her wings between the thumb and fore finger of the right hand, now place her body across the fore finger of the left hand, bringing the thumb gently down upon her head and thorax—you now have her in position—then take a small pair of shears and trim off the inside of one pair of her wings, preserving the original shape of the wings, and you have done a scientific job. With a queen manipulated in this way, the inquisitive workers will rarely ever find fault.

But, right here I wish to suggest what I have never seen a hint of in print, or heard mentioned by any one, viz.: That if the honey bee is not an exception to all the rules of past experience, as applied to winged domesticated animals—our domesticated fowls—the continuous clipping off the wings of the queens, thus depriving them of their natural use and health-giving exercise, as well as the interference with the circulating life-giving fluids of the body, will as certainly, in process of time, enfeeble the "wing power" of their progeny, as the same process of treatment has changed our domestic fowls from "birds of the air" to their present toddling condition. Most likely there are some who will be ready to laugh at such an idea, nevertheless, causes will continue to produce their effects all the same.

Dr. Wm. M. Rogers, of Shelbyville, Ky., from whose keen perception nothing escapes, pointed out to me, several years ago, unmistakable evidence of clumsiness on the part of our "carefully bred bees," seen in their proneness to trip and tumble on their backs, and their spasmodic struggles to right themselves when rushing out of the hives during a brisk honey flow. Their lofty tumbles on the alighting-board is not only amusing and ludicrous to behold, but is in striking contrast with the little lithe iron-gray bees that plied in and out of my box hive 20 years ago. In every attempt to breed for good points, "wing power" should stand at the head.

Christiansburg, Ky.

Mahoning Valley Convention.

The annual meeting of the Mahoning Valley Bee-Keepers' Association was held at Berlin, on Jan. 19 and 20. After the reading of the minutes of the last meeting (which were approved), the president, Mr. L. Carson, appointed the following committee on bee fixtures: Mr. H. A. Simon, Mr. Mattoon and Mr. Eadler. In the absence of the secretary the chairman appointed H. A. Simon, Sec., *pro tem.* The president then announced the meeting open for discussion, and the first question was: What is the cause of dysentery?

Mr. Simon inquired under what condition they got it.

Mr. Mattoon: I have noticed a good many dead bees on the bottoms of my hives, and a bad odor; it may be that they are too damp.

Mr. Simon: I would use syrup from good sugar; I think it a good remedy.

Mr. Carson: A few years ago my bees became affected with the dysentery. I carried the bees into the house and fed them melted sugar, warmed them up thoroughly, replaced them on the stands, and did not lose any.

Mr. Mattoon: I give my bees a flight once in the winter. I place one hive at a time in a large hot-bed, and give them a good flight; then cover the glass all over, but a small place just over the hive, and they will all go in and losses by this process are few.

Mr. Newton applied sulphur in small quantities, by raising the blanket and scattering it over the bees. He has used salt with good results.

Mr. Simon thought dampness and close confinement the cause of dysentery. A remedy for this difficulty was proper ventilation and close attention to the bees.

Mr. Carson thought that the Italians were preferable to any other; they were strong, vigorous workers; the queens were prolific, and they are generally easy to handle.

Mr. Newton thought one or two hives enough for an amateur to commence with. He should not put too much money in a business he is not familiar with.

Mr. Simon considered five or six none too many; a man would have to pay considerable attention to that many, and would take better care of them.

Mr. Carson said, it will pay to plant pasturage for bees; sow sweet clover (*melilot*); fig-wort has great merit. I would advise the planting of basswood and the golden willow along the highways.

January 20th, a short forenoon session was held, discussing the management of bees, in general.

The inclemency of the weather kept many from attending the afternoon session; the election of officers for the following year resulted as follows: President, Leonidas Carson, Milton; Vice-President, H. A. Simon, Lordstown; Secretary, E. W. Turner, Newton Falls; Treasurer, Geo. Carson, Berlin, O.

Mr. G. A. Newton, of North Benton, O., exhibited and explained the working of his drone trap, for catching black or hybrid drones.

Mr. Eadler exhibited some of Gray's bee feeders.

Mr. Frank King showed some of his improved wired frames for extracting.

Mr. Simon said, if honey is to be shipped it is necessary to use separators.

Mr. Carson: I would advise all bee-keepers to try and sell all their honey at home, even if you sell for 2 cts. per pound less. I consider it one of the healthiest sweets, and excellent for canning fruits. We use it in our family, and never have any fruit spoil.

Mr. Simon suggested that we create a market for extracted honey at home.

Mr. Simon said, I moved some 30 colonies of bees last spring, about the first of May. I removed the cap, covered with wire cloth, and moved them on a spring wagon. Box hives I invert, and cover the same way.

Mr. Simon said, I use the Peet cage for introducing queens. I sometimes coat the queen with honey and introduce at the top of the frames. I generally have good success, either way. I always feed the bees when I introduce a queen, if there is not a good flow of honey.

The question of our future meeting came up for discussion. It was suggested that we have a picnic dinner, bring our wives and children, and have a good social time, and that we have a general display of bee-keepers' supplies.

Adjourned to the first Saturday of May, 1883, at the Center of Berlin.

E. W. Turner, *Sec.*

For the American Bee Journal.

Best Bees—Reply to Mr. Demaree.

JAMES HEDDON.

The discussion of the question of which are "the best bees," has been before the general bee-keeping public for some time. They have, no doubt, heard about all they desire to hear on that subject, at least from Mr. Demaree and myself, who seem to be the chief disputants. My last article was an endeavor to sum up as clearly as possible, not only what I believed to be vital truths connected with the subject, but what I believed were generally accepted as facts.

I was incorrectly reported to have said, at our State Convention, that light Italians were more gentle than the dark ones. Like a drowning man catching at a straw, Mr. Demaree used this "phantom" with which to open controversy on a worn-out subject. That it is worn out with him, is evinced by the fact that his article on page 82, says nothing about it; the afterpart of it being, "how it market honey," while the forepart consists of a series of assertions regarding my inability, etc. These points should be left with the readers to judge for themselves; should they not? This acting as chief disputant and judge, is again repeated by Mr. D. Is he afraid to leave it to the readers? Is he disheartened by the statement of Dr. Baker, in his article on page 74, 6th paragraph? Mr. Demaree must know that I am not the author of the term, "long leather-colored Italians." He says it is an "egregious blunder" for me to confine the term long, to the darker Italians. I will try to show why it is not. I have never seen any Italians of the light hue as long as the average of the darker ones. I have always heard leading breeders, that I have met with, speak as though they never had. Never having seen, heard or read of such lengths and colors combined, as Mr. D. mentions in his second paragraph, where does the blunder come in? If Mr. D. has seen such, we are both consistent, and *no one* has blundered.

Mr. D. asks, "Is life a great tread wheel?" to which I reply, too much so with many of us. He infers that I am a "bread and butter writer." *Good.* If I have written anything which has even helped to lessen the struggle for bread and butter, that is, to make the getting of it more simple and easy, be it ever so little, I shall be at any time proud to compare my record with his, as an apicultural writer. About his ability as a honey vender, I will not imitate him, but leave each reader to judge for himself. In the remainder and forepart of his article, he says, that I am not only a "blunderer," but a "confusser;" that my articles "are replete with errors," "marvelously superficial," "do not attempt to controvert a single important proposition, except in the way of unscientific bread and butter arguments," etc.,—as though "science" (known facts) is something separate from bread and butter getting. If "science" has naught to do with our "dollar and cent" success in bee-keeping, let our future scientific articles be few and far between. The above assertions regarding myself, and disregarding the subject, reminds me of the following:

> Por.—Why, man, what's the matter? Don't tear your hair.
> Sir Hugh.—I have been beaten in discussion, overwhelmed and humiliated.
> Por.—Why didn't you call your adversary a fool?
> Sir Hugh.—My God! I forgot it.

Dowagiac, Mich.

[Any controversy that descends to personalities is not only unwise, but is generally distasteful to the average reader. Mr. Demaree had the first article, and with this rejoinder of Mr. Heddon, we will, for the present, at least, dismiss the subject. Both disputants have "had their say," and anything more will be but a repetition, or drift to side issues and personal allusions.—Ed.]

* * *

For the American Bee Journal.

Nebraska State Convention.

[Concluded, from page 84.]

The remainder of the time was devoted to discussions and informal proceedings.

Question: "Where, in the hive, do bees cluster most?" Mr. Turney said, his bees invariably clustered in that part of the hive nearest the entrance.

M. L. Trester thought they clustered at that point in the hive where the temperature, ventilation, honey, etc., came the nearest to meet their requirements, therefore, in different hives the cluster varied in its location.

The size of section boxes, was then discussed, and Dr. McAllister thought that we must supply the demand whatever size it may require—half-pounds or otherwise.

Mr. Corbett would use wooden separators, and 4¼x4¼x1¾ boxes.

Mr. Rouse said, that we could not afford to use the half-pound sections for the extra pay that was in them.

Dr. McAllister said, that the bees were apt to build their cells of an uneven length in any size of section, and Mr. Meyers concurred with him, although he has dispensed with separators.

M. L. Trester believed they preferred an even length in the brood nest, but outside of it they would run to both extremes of long and short cells.

The president said, they preferred a certain length, that he should return to the sections 1½ inch wide. If he found that he had more sections on than the bees could occupy, he would exchange those inside for the outer ones.

Mr. Rouse: As yet I cannot get along without separators.

C. A. Speice asked, which was most profitable, comb or extracted honey?

O. Meyers believed it depended on the market; that he could get three times as much extracted as comb honey.

Mr. Speice was of the opinion that there was no trouble in marketing, if the people were only educated up to a point where they had confidence in the producer and dealer.

The president knew that some people liked the flavor of wax, spoke from experience; he also favored a trade mark on honey packages.

Dr. McAllister said, that very few people knew that wax was indigestible.

Several members thought that the glucose traffic was illegitimate, and ought to be crushed.

Mr. Trester believed that it was cruel to kick a dying man, and as the glucose business was at present in a very unhealthy condition, it would be humane to let it die in peace.

The question of a State trade mark for honey was discussed at length, without any very definite conclusions.

In regard to single and double-walled hives, Dr. McAllister said, the former are *the* hive.

T. L. Whitbeck had used chaff hives, but did not like them; he believed they were too warm, thought bees were thermometers, and the chaff hive would become so warm that they would fly out and be lost, in the cold weather; he puts his hives close to the ground, and makes a telescope for them, but did not think it paid; he thinks bees require a great deal of ventilation.

Mr. Rouse: A chaff hive, if properly made, is a ventilator of itself. The cost is no more than the cost of protection, in any other way. He has failed to keep bees too warm, out of doors. He said he took charge of the Omaha apiary in February or March, 1881, in the cold winter, and found that the bees had been put on to five or six frames, in chaff hives, with chaff cushion, and some hay thrown on top. There were about 2 feet of snow, and the hay had become full of melted ice, so that it had to be chopped away; the entrances had become entirely filled with ice, so that they had to be opened with a small chisel; the hives were close to the ground, and in spring they only lost 9 out of 107. In the winter, he found the top of the chaff cushion covered with frost, that looked like snow, but it was warm inside the cushion. Two inches of chaff is about right. In winter, he examined and found the bees lively, and the sides of the hive were dry. They consumed only 4 or 5 pounds of honey.

Dr. McAllister used to think that several auger holes were necessary for ventilation; now he thinks the crevices about the top of a hive sufficient; he believes that gluing is evidence against top ventilation.

Mr. Speice strongly believes in chaff hives, wants 2 inches under, 3 inches on the sides, 5 inches in front, and a 3-inch cushion on the top. He puts a kind of a hood over the front of his hives, so that the bees can take a promenade if they wish, when the weather is too cool to fly.

The president does not believe in late manipulation.

R. V. Muir wanted to know the relative cost of cellar and out-door wintering.

N. Pierson believes that drone eggs are often laid by workers while the queen is present in the hive, while Mr. Hawley was of the opinion that the queen lays all of the eggs, from the fact that as soon as she is removed laying ceases. Fertile workers are undeveloped females; they are detected by seeing several eggs in a cell, in irregular and improper positions.

The president said, that they will consume double the amount of honey out of doors than they will in the cellar. It is advisable to keep them in the cellar until there is honey to gather, if you can.

Mr. Fletcher asked if basswood will grow in any soil.

Mr. Speice: No, it will only thrive in a damp soil. I have some on high land that hardly grows at all. I have not mulched any.

Mr. Muir: I think they will thrive anywhere.

G. M. Hawley: I have some on second bottom, and they grow very fast.

Mr. Meyers stated that the Rocky Mountain bee plant would grow in Nebraska.

Mr. Corbett: I know that it has been growing west of Omaha for the last four or five years. It is also known as "Texas bee plant;" it has magenta or purple blossoms; the seeds grow in pods like mustard seed, only dark and rough.

How many bees can be kept profitably in one hive, was inquired and answered by the secretary; the number that can be kept in a hive, under favorable circumstances, without their desiring to swarm; but when they want to swarm, you might as well let them have their way, to a limited extent.

The president did not desire such large colonies, to get comb honey, as was considered necessary by most bee-keepers.

What shall we do with lazy queens, was asked. The president said, pinch their heads. The secretary stimulates in various ways, such as strengthening, or exchanging combs, with adhering bees, with enthusiastic colonies, and finally pinches her head if all other means fail.

C. H. Rose had a lazy queen last year; but this year she is good.

Is "honey dew" good honey? was asked. The president said, that from aphides is certainly not.

G. W. Stark had seen honey dew on all kinds of leaves, but saw no aphides. This dew came in July, and was all consumed by bees.

Mr. Muir: We have a large yellow willow that the bees worked on for a week, then I noticed glistening sticky leaves; this was from the plant louse, and the honey was of fine flavor and good color.

The Convention having been in almost continuous session for two-and-a-half days, a committee on resolutions consisting of C. L. Speice, Jos. Baird and Miss Ada Hoyt was appointed, and during their absence a general visit was indulged in, all appearing to enjoy themselves, and seeming to regret that they would not be likely to have an opportunity to meet again until the second Thursday in January, 1884.

The committee reported the following resolutions which were adopted:

Resolved, That the thanks of the Association be, and are hereby tendered to the people of Wahoo for their kind hospitality so generously extended to the members of the Convention, and be it further

Resolved, That we hereby tender our thanks to the B. & M. and the U. P. railroads for the encouragement given to apiculture by reason of furnishing reduced rates of fare to our members.

Adjourned. M. J. TRESTER, *Sec.*

For the American Bee Journal.

Figuring up the Large Yields.

GREINER BROS.

On page 58 of the BEE JOURNAL for 1883, we find this: "I like the BEE JOURNAL, but I do not take much stock in those large yields published. I will give these parties $500 in cash to instruct me how to obtain one-half that quantity, and pay all expenses besides. I suspect that it was not weighed on standard scales."

Our reply is simply this: If Mr. F. will guarantee or produce annually such honey seasons as we had in 1881, we will guarantee him the same large yields. It is only necessary for him to take the position of scholar and accept Mr. Doolittle's writings as instructor; this he can have without love or money, except $2.00 yearly subscription for the BEE JOURNAL.

Perhaps Mr. Heddon, or, in fact, almost any experienced veteran of the fraternity could lead him to success; the reason we mentioned Mr. D. is because we happened to take him for our guide, and a good one it was, too, for we feel indebted to him for the 400 lbs. we took from one colony (spring count), a year ago. It is true, we used no standard scales to weight it, for it would be almost impossible, or, at least, a great loss of precious time to run to the scales with every section, and weigh, and record it, when we have all we can possibly do to take finished sections and replace empty ones, which is the case in a good honey flow. We use 2-lb. sections exclusively, and the only way of keeping account of yield we find practical, is, to record the number of sections taken from each hive, and this we do with pencil, on each cover.

When the season is past and the honey all handled and weighed, it is an easy matter to figure the average per colony, of the season, and if we wish to ascertain the yield of any particular one, all we have to do is to raise the cover and add the number of sections taken, which, multiplied by 2, will give a very correct report in pounds. To be sure, sections will vary some, according to the filling of the bordering cells, but what difference does it make in a report to call 99 sections 200 pounds, when, by actual weighing they might have overrun or fell short a pound or two, as long as it is the best we could do. The reason we give our yields in even pounds is, because it is easier to say 400 lbs. than 399 lbs. 14¾ oz., and, besides, the latter is just as liable to vary a trifle as the former, unless obtained by actual weighing, which, we think, no extensive bee-keeper can afford to do in the hurry of the season.

We do not blame Mr. F. in the least for doubting these statements, for we were troubled in the same way until the summer of 1881, when our own eyes witnessed what our reason had tried to disbelieve. It taught us the lesson to be very careful about doubting the veracity of our fellow men, especially when these doubts were publicly expressed.

On page 60 we find "A Candid Request," with an additional remark by the editor. As an explanation to these, we will give a short account of the way we obtained 400 lbs. from one colony, spring count.

The colony was divided in proper time and the queenless half at once supplied with a laying queen. Soon after, one of these divided colonies gave us a natural swarm, which was hived on a set of empty combs and the mother colony again supplied with a laying queen. The one that did not swarm, filled and finished 6 half stories, each containing 15 two-pound sections, and the seventh was all built out and nearly filled, with quite a number of sections finished, so that we estimated (not weighed) the contents to be equal to 8 or 10 finished sections. The whole yield of this one-half of the original colony being thus, 99 sections or 200 lbs., as given in our report. The other half, which cast a swarm, finished 3 half stories and about one-half of the fourth one, so that the yield of this one was figured at 52½ sections or 105 lbs. The natural swarm was hived in our absence and could not be traced, so we took the average yield of our natural swarms as a report for this one, which was 41 sections, or 82 lbs.; they all worked pretty near alike and we were not far from a correct result by doing so. The sum of sections taken from these (now 3 colonies) footed up to 192½ sections or 385 lbs. We used no foundation to obtain this amount except a starter of about ½x3 inches in each section.

When putting up the honey for market, our crates, of 20 sections, averaged from 41 to 42 lbs. net, on account of their being well filled and capped clear to the wood of the sections, and from this we figured 1½ lbs. additional for every 20 sections, or 143¾ lbs. in all, making an aggregate of 399¾ lbs. from the original one colony, and this we called, in our report, 400 lbs.

Now, if there is anything wrong in our figuring the number of pounds, as stated, or, if the swarms were doubled to more than the capacity of one ordinary hive, by giving them all the section room they saw fit to use, then we are at fault, and would be pleased to be corrected.

Our report for 1882 is very different to that of the year previous; whilst the latter was the best season we ever had, the former was the poorest. One apiary of 60 colonies gave about 40 lbs., and another, of the same number, about 34 lbs. per colony, and hardly any increase at that.

Mr. F. claims to be the first person who adopted wood separators in this country; we have used them since 1877 and recommended them years ago, through *Gleanings* and the BEE JOURNAL. Several others have also given their experience lately on the same subject, and their points of argument in favor of wood seems almost like a repetition of what we wrote at that time. We were opposed in argument by much better informed bee-keepers than we claimed to be, and withdrew from the contest. Still, we continue to use them to this day, and have now no surplus arrangement without them; we can endorse all that Mr. Isham claimed in their behalf on page 54.

N. Y.

For the American Bee Journal.

Trying Ordeal for the Bees.

L. JAMES.

Bees that are on their summer stands, in this section, are passing through a severe ordeal this winter, and just now their endurance is being put to the test. After a long, cold spell, on the 2d inst. it moderated a trifle and began snowing, in the morning; later, turned to a light rain and a northwest wind sprung up in the afternoon, and freezing as fast as it fell, coating every object with which it came in contact. By midnight, the limbs of fruit and shade trees began giving way from the weight of accumulated ice, and the crashing and snapping from that time until 10 o'clock next morning, was terrible, and the damage to our trees is great.

I was unable to visit my apiary until to-day, it being a mile from town. The sun shone clear and bright, just as if nothing was wrong about here, and, I must say, that the sparkling and glittering of the icy diamonds in his clear, cold rays, as they swayed to and fro, was a splendid sight to behold, but when I walked out to the orchard where 39 colonies of my bees were, I thought the thing was entirely overdone, and I saw nothing beautiful in the prospect before me, for there they were, buried up in a wilderness of icy limbs and brush, glued fast at every point wherever they came in contact with any object—bee hive, cover or ground. While standing there and looking at the damaged fruit trees, and studying how to get to the almost inaccessible hives, I was very much impressed with the belief that when the thermometer stands at 95° in the shade, an apple orchard is a very good place for bees, but in such times as these it does not appear so. I was able to get at nearly all of them, and found the entrances, in nearly all, completely closed with frozen snow, ice and dead bees; the covers frozen fast to the hives, limbs of the trees, and long icicles pendant from the covers and porticoes, all round them. I opened the entrances as well as I could, and, in most of them, the bees seemed lively and in force, coming out as soon as relieved. The honey boards being off and cushions or quilts being on the frames, saved them from being smothered. Three colonies, I think, are dead, and more probably, will be if such a state of things continue much longer. I have over 120 colonies in a cave that I do not feel much anxiety about, but could not get to see them as the outer door was frozen fast.

Atlanta, Ill., Feb. 5, 1883.

For the American Bee Journal.

"Why I am a Novice."

B. F. WOODCOCK.

I can recollect of no period of my boyhood when I did not long for a colony of bees. My aspirations ran no higher, at first, than one colony; but I wished for that more than any other earthly possession. My father was a lover of honey, but a despiser of bees. The latter propensity predominating, he chose to buy his honey, much to my discomfiture.

When about 15 years of age, I concluded to have a colony of bees, at all hazards. A visit to the apiary of D. Z. Kagarice (a disciple of Langstroth, and a resident of Bedford, Co., Pa.), confirmed me in this resolution. I made a conditional contract, and went home highly elated with my prospects, while visions of an abundant supply of nature's choicest nectar, passed through my mind.

As my exchequer had never risen to half the amount necessary to purchase a colony of bees, I was obliged to make my wants known to my father, who positively declined furnishing any specie for that purpose. I then proposed to work out until I earned the sum required, but was refused the privilege. My ardor exceeding my judgment, I continued to importune him about the matter, until he, one day, gave me very distinctly to understand that he was running that *ranche*, and that while he did there would be no bees buzzing around his ears.

My air castle crumbled, the prospective bee yard vanished, and I threw up the sponge. Permit me to say (without intending the least reflection upon my father), that cold water of this kind has dampened the aspirations of many a boy, and turned him from a vocation for which he was naturally adapted, to one for which he had neither inclination or adaptation.

I have neglected to state that, at the age of 10 or 12, I was the possessor of a miniature apiary of bumble-bees. I secured the nuclei in the fields, early in the summer, and transferred them to box hives about 6x6 inches square and 5 high. I placed these on a broad board, elevated about a foot from the ground, and put a good roof over them. I did not divide for increase, neither did they swarm. In the fall I used brimstone to secure their treasure, and was as happy over my pint cup full of honey as is Mr. Heddon over his thousands of pounds.

To atone in part for my "blasted hopes," I paid frequent visits to Mr. K. and his apiary, and would sit, for hours, an attentive listener to his plain practical exposition of the habits and instructive wisdom of the honey bee.

After attaining my majority I again applied for the privilege of starting an apiary on the old homestead, promising to buy the bees myself and share the surplus honey with the family, but my father could not be persuaded that he would not be a target for their javelins (as he terms them), and kindly refused.

Having selected a partner for life, who, by the way, is an apiarist of no mean pretensions, I, or rather we, came to the Hawkeye State, and in the fall of the same year (1876), purchased two colonies of black bees. Of my subsequent experience I shall have something to say in the future.

I am very much pleased with the Weekly JOURNAL, and prefer it to a monthly.

Felix, Iowa, Jan. 7, 1883.

For the American Bee Journal.

Half-Pound Sections and Separators.

A. J. FISHER.

Mr. Heddon requests all to give their opinion on the half-pound sections. It is my opinion that they are too small to be profitable to the bee-keeper. It is true that some may demand them, but are they willing to pay the extra price above the one-pound sections to make them profitable to the bee-keeper? I say, no; considering the extra expense of construction and the less amount of honey obtained in them, my opinion is that the bee-keeper that put his honey up in half-pound sections will never compete with that one who uses sections from one to two pounds.

Those who are contemplating using the half-pound sections during the coming season should take the advice of F. C. Benedict, on page 8, who, I think, talks squarely on the half-pound sections. As for separators, I think I will have no use for them in the future.

I use a section box 1½ inches and 1 11-16 inches thick, and have eight and nine of them combined together, as one solid box, without separators, making a capacity of about 9 pounds. And I am one of those who claim that honey will be stored in a box of that style, where the bees can assemble in a large cluster and keep up the required heat for comb building, much faster than if each box was separated with a piece of tin or wood, besides the expense of construction, to use tin or wood.

Economy is the road to wealth. Those tin separators, with kinks in them, filled up with bee glue, are dirty and sticky things to handle. In the above style of box I have no such dirt or traps to work with, and I expect to crate my honey too.

Am I right or wrong in regard to more honey being stored without, than with separators? What does Mr. Heddon say to this question? I predict that the time will come with "the knowing ones," that tin separators will be "things of the past." Can we not have, from the knowing ones, more discussion upon the question of how to get the most honey in a given time in the most marketable shape (not in half-pound sections), and benefit all concerned?

East Liverpool, O.

For the American Bee Journal.

A Report from Kansas.

HIRAM J. WARD.

After keeping bees 14 years I am going to try and make my first thorough report, at least as far as amount of surplus honey and marketing the same is concerned. The forepart of the year 1882 was very backward, being cold and wet, and as I am situated where there is no basswood, nor white clover, my bees were compelled to live on fruit and wild flowers, until alsike clover began to bloom. They gathered no perceivable surplus until the middle of June, and then for only a few days, and not enough to fill any sections. For about six weeks they only gathered enough to live upon, but I had a lot of old combs partly filled with honey from the bees that died in the winter of 1880-81, and I gave them to the bees, to stimulate breeding, hoping for a change in the weather, and sure enough, it came about the first days of August. On the 7th, I had a natural swarm, and others on the 8th, 9th and 10th.

I had given up all hope for the bees, and turned my attention to the farm, and marketing early apples (for I have a large orchard), but as soon as they began to swarm, I knew there was honey, and so on Aug. 8, I extracted my first honey from an eight-frame Langstroth hive, without top story, emptying a few combs only, to give the queen room, and put on the top story full of sections. From that time until frost, I had all I could do to take the honey and keep them from swarming.

This being my first year with Langstroth hives and sections, I had some trouble to get the sections evenly filled, for I have never used any separators yet. I have used three kinds of hives; the original American, the Quinby and the Langstroth, but I am putting all of my increase into Langstroth hives now, and shall change all from the American into them, by degrees.

I commenced in the spring with 17 colonies, and increased to 25 by natural swarming, and took 437 pounds of comb honey in sections, and 872 pounds of extracted, and have sold all of the comb at 22½ cts., and nearly all of the extracted at 14 cts., at home. Total, $220.40; an average of $12.96½ per colony, spring count; all done in just seven weeks. Besides, I have about 300 pounds in brood frames that I did not extract, for feeding next year. I have never fed a pound of anything but honey, and have been successful. I am seeding pastures of clover and other honey plants, so as to give my whole attention to bees and apples, but as soon as I get enough bees to keep me busy I will turn the apples over to somebody else.

Farmington, Kans., Feb. 5, 1883.

For the American Bee Journal.

Large Yields—A Review.

J. V. CALDWELL.

On page 60, present volume of the Bee Journal, Mr. S. J. McKennie wishes bee men to be candid and let their readers know from how many colonies they obtained their large yields of honey, and also says it would be better to exaggerate less. Mr. F. H. Finch, on page 58, also wishes to pay some one a pile of gold to instruct him how to get one-half such crops.

Now, in all candor, gentlemen, would it not be better to acquaint yourselves with the facts in the matter, before intimating that some over state the results?

Let us look at the matter a little. On page 59, Mr. McKennie says he began with 5 colonies and increased them to 17; he took 450 pounds of honey from them, and admits he lost 200 lbs. of honey as the result of queenlessness, and his bees were put away with 50 pounds to the hive. Now, suppose he had concentrated the honey-gathering powers of the bees in the original 5 colonies. Might not the result of his summer's business have stood something like this? Leaving out 5 colonies, we have 12 with 50 lbs., making 600 lbs.; with the 200 lbs., making 800 lbs. This, with the surplus he obtained, making 1,250 lbs. This, divided by 5 (the original number), would give him 250 lbs. to each one, spring count, which, at 18 cts. per lb., makes the nice sum of $45 per colony. Which, Mr. McKennie would say, no doubt, looks like an exaggeration; but as a matter of fact, is not.

Now, for one short item of personal experience, and which I can prove beyond a doubt. Last season I had one colony, which, without any help, and although the forepart of the season was very cold and wet, (they were not fed an ounce of honey or sugar), gave me 235 well-filled one-pound sections, and 10 lbs. of extracted honey. They did not attempt to swarm, and they did more than this. I had my bees sitting on brickbats, close to the ground, and, although they did not cluster out, a lot of them went under the hive and built comb enough to store several pounds of honey, where I could not see them. These bees were what I call Italian-hybrids, a pure queen probably mated with a hybrid drone.

I entirely agree with Mr. Heddon, on page 53, and although I would prefer the pure Italian if it had all the good qualities we desire, yet, I shall certainly breed from my best honey-queens, let them be yellow, black or mixed. During my early days in the business, my great ambition was to get the yellowest and handsomest Italians. Now, the same ambition leads me to obtain the greatest amount of honey from the least number of colonies.

Who will rear queens that will pile up the honey, or rather, infuse the energy into their progeny, to roll in the honey without frittering their time away in swarming and idling? I should be glad to pay $5 each for such queens.

I have several queens that I could not be induced to part with at double that figure. In saying this I have no "axe to grind," as I do not rear any for sale, and do not expect to. We who are putting our time and talent in apiarian pursuits must look at these things from a strictly business point of view.

Cambridge, Ill., Jan. 24, 1883.

For the American Bee Journal.

Honey and Bee Show in Nebraska.

T. L. VON DORN.

Editor Bee Journal:—Please let me call attention to the Premium List of the Nebraska State Board of Agriculture: Class 6½. Best colony of bees, 1st premium, $25; 2nd, $10; 3rd, $5. Comb honey, 1st, $25; 2nd, $10; extracted, $5; 2nd, $3. Best display of honey, in marketable shape, $10 and $5; apiarian implements, $10 and $5; foundation, full to partly drawn, $5 and $2. Open to the world, except on honey, which is limited to Nebraska.

Now, I think we have secured a fine premium list, and we are anxious that our neighbors compete at least for the premiums on best bees. The test is, net gain in stores, for two weeks, and will commence the latter part of August and end during our State Fair. The superintendent is a practical apiarist, and a man who enjoys the confidence of every one who knows him, and every precaution is taken to ensure accurate and just results.

I have taken the premium on bees for two consecutive years, and I propose to do so again, if I can; but if any one else can show us better stock or management, he will find a hearty welcome to the prize, and a good market for some stock. The conditions are that all the bees in the colony shall be the progeny of the queen and colony on exhibition. That they shall also show the usual docility or amiability of pure Italians.

I voice the feelings of the Nebraska bee-keepers, when I extend a cordial invitation to all those who have choice stock to come and get the $25, if they can. I shall be glad to give any further information desired.

Omaha, Neb., Feb. 5, 1883.

[We congratulate the bee-keepers of Nebraska on their success in obtaining such an excellent Premium List for the Bee and Honey Show, and sincerely hope it will have the desired effect.—Ed.]

SELECTIONS FROM OUR LETTER BOX

Statistics for New Jersey.

After correspondence with Dr. Miller, I find that I can best carry out the auxiliary purposes of our Association, by requesting the fraternity in New Jersey to forward their reports at once to Dr. C. C. Miller, Marengo, Ill. Give facts on a postal. Do it now. C. W. Rue,

Committee, N. J. & I. B. K. A.

Bees and Grapes.

For ten years, or more, I have had very fine Virginia grapes in front of and very near my apiary, and, to my great surprise and deep regret, the bees do not "injure" my grapes. I wish I could get them to "go for" the grapes, peaches and all other fruits. Last summer I had as fine grapes as I ever saw, but the bees sucked none but those which were "injured" by geese, chickens, wasps, etc. The story about the "Honey in the Rocks," belongs to California instead of Virginia. E. C. Jordan.

Stephenson's Depot, Va.

My Wintering Troubles.

Last January I purchased 10 acres of land at Hagerstown, Md., intending to put up a building early in the spring, and be located there by harvest. I commenced in April, but the weather being so very unfavorable for building and bees, being disappointed in labor, etc., I found it would be impossible to go on with my building, and fill my orders; so I postponed the building until after harvest. Aug. 1, I commenced building again and my time was so much taken up during the fall that I thought I had no time to look after my bees, and I thought they were all pretty well supplied with stores, except those at Hagerstown, so I congratulated myself that my bees were strong in number, with plenty of stores, and did not need special attention, and out door wintering might do pretty well after all. Cold weather set in about Nov. 20. I still expected some warm weather, but it did not come and about the middle of December I put the weakest of those at Hagerstown in the cellar, and thought the rest of them might go through out of doors, but by Jan. 10 I found it would be a failure, so I moved them into the cellar, and they are doing well. I have spent the most of my time this winter at Hagerstown; I am at Double Pipe Creek, to-day, making arrangements to move next week, and thought I had better look after my bees, and, to my disappointment, find them in a very bad condition. Ten colonies had already perished; a few may have starved for want of honey year the cluster, but most of them had the dysentery. My bees at this place have consumed an unusual amount of honey already, and are generally bloated, and if it does not get warmer soon, I fear the loss will be heavy;

there is an unusual amount of dead bees in the hives. As the weather is too cold to disturb them, out of doors, I did nothing more than to put a well-filled comb of honey, having a passage cut through it, over the cluster, which will be sufficient for them until the middle of March, if dysentery does not kill them. I shall move part of them to the cellar and give them plenty of upward ventilation, and experiment with them and report later. I cannot say how my bees are wintering in Virginia and W. Virginia, as I have not seen them since the fall; then they had plenty of stores. We have not had extremely cold weather this winter, but it has been continuous for over 2 months, and damp, with no chance for a flight. S. VALENTINE.

Hagerstown, Md.

How the Bees are Doing.

This is another very severe winter. The weather has been very cold ever since Dec. 1. Old bee men think we will have another grand disaster, like the season of 1880-81. However, I hope they are mistaken. My bees had been confined since Dec. 1 until Jan. 27, when a portion of the bees had a flight. Those in two-story hives came out the most. When I say two-story hives I mean 2 hives, one on the top of another, with both entrances open. They seemed to be dry and bright. Those in one-story hives did not come out as much, although similarly located. Very few dead bees were under the clusters of the two-story hives, but considerable more in the single ones. The snow is over a foot deep; the thermometer, in the shade, shows 2° below freezing point. Comparatively few bees remained on the snow, considering the chilly air. The bees are packed in leaves, on the back and between, and the front open to the sunny side. The bees spotted the snow some, but not much.

H. S. HACKMAN.

Peru, Ill., Jan. 31, 1883.

Sundry Questions.

My 35 colonies are all packed on their summer stands in straw, chaff, leaves and cobs, as an experiment. They had a good cleansing flight on Dec. 24 and Jan. 28. They seem to be strong and healthy, so far. The index for 1882, is a great convenience. I have been looking over and reviewing some of the articles written last year. I intend to try Prof. Cook's plan of preventing increase, on page 474, July 26, 1882, and if it works well with my bees it will be worth more to me than the price of the BEE JOURNAL for a year. Mr. Heddon's honey board is new to me. When the sections are all on and full of honey, will not those ⅜ inch slats sag in the center with the weight, or how is it prevented? Will Mr. Heddon tell us? Do you think the one-piece dovetailed sections as good as nailed ones? Do you know anything about Lowmaster's drone trap, referred to on page 313 of the BEE JOURNAL for May 17, 1882? I want one of some kind. Does not Prof. Cook and others teach that the brood combs must be 3 inches from centre to centre? That is what I understand; if so, how can you get ten frames in a hive of 14⅛ inches, as the Langstroth hive is described on page 55, Jan. 24, 1883, by M. M. Baldridge? I have been taught and practising with a hive 15 inches wide for ten frames, and 12 inches for eight frames. I never handled the movable frame hive much, and I want to be sure I am right; "then go ahead." D. S. KALLEY.

Mansfield, Ind.

[We believe the one-piece sections are as good as any, and are superseding all other kinds. We know nothing more of the drone trap than is mentioned by Mr. Lowmaster.

You are mistaken about the distance between brood frames. Prof. Cook, as well as all others, state that the distance should be about 1½ inches from centre to centre.—ED.]

Hard Winter—Bees Dying.

Bees are beginning to die, here. A good many colonies, with chaff and similar protection, are dead. I have about 100 colonies in a well-ventilated bee-cellar, that begin to show symptoms of dysentery. The cellar has been of uniform temperature, about 35°, with all other conditions favorable, but present prospects of successful wintering are not promising.

LEONIDAS HUBBARD.

Waldron, Mich., Feb. 12, 1883.

Last Season's Work.

Last spring we had 14 colonies; increased, by the middle of July, by natural swarming, dividing and nuclei, to 24, and there we set our stakes. But bees, like many others, are whimsical. On the last of July they commenced swarming. Nearly every pleasant day out came a swarm, and when threshing; while I, with the assistance of a young girl, was getting dinner for 19 men, one day, two swarms came out; the next three, between 10 and 12 o'clock (bee-keeping and farming makes lively work; no time for blues, dyspepsia, and other luxuries of that kind). Well, I dropped all, to help hive or return them. One swarm, of our best Italians, the largest I ever saw, had come out, two days previous, and had been returned. The third time they clustered on an apple tree, near by. We hived them under it, and when I saw them going in nicely I skipped to that dinner. I never forget the old adage, "The way to a man's heart is through his stomach." I think it was my nice bread and butter that made such a big hole in my husband's heart (and I really believe honey has a tendency to make it larger every day). In the hurry, instead of putting on the cover, the "gude mon" laid a board on top of the hive. Well, the swarm left, and the question is, was it for want of ventilation, or had its conduct of the two previous days something to do with it. We should learn from failures. They kept up their swarming till Sept. 1. Some we hived, returned some, and 8, to our knowledge, absconded. On Sept. 1, 2 came out; the first we hived; it filled the body, and gave 20 lbs. in sections; the others we returned; hives were exhausted, so they stand 39, a very unromantic number. While extracting, during the middle of September, we found 5 colonies without queens. We imported 3 Italians, and introduced them safely. The others we gave larvæ, and, on Oct. 5, they had queens. They are all on their summer stands yet, with chaff cushions and quilts over them. They were not fixed for winter when the blizzard came, and I am fearful. Does anybody ever get quite ready for winter? A word about that delinquent nuclei. They reared a queen about Sept. 1, and filled the body of the hive; we got about 1,000 lbs. of honey. Our best colony of the three, that did not swarm themselves to death, gave 125 lbs. of comb honey. Last year, comb and extracted honey sold readily for 20 cts. There is so much fruit here, this year, that honey is a drug. Egypt might be called, this year, if not the granary, the fruitery of the East. Thousands of barrels of apples have been hauled by our house one mile to the depot. There are two orchards in our vicinity of 150 and 160 acres respectively. There were hundreds of bushels of black or rather dew berries, picked from those orchards and shipped to Cincinnati and other points along the O. & M. road. We have sold 200 lbs. of honey at 20 cts., and 100 lbs. shipped away at little less. Many producing honey in the old way, bring it to town and sell at 12 and 13 cents. MRS. C. J. ALLISON.

Noble, Ill.

Cellars and Summer Stands.

Time with his sickle is mowing the days and hours. Seasons come and go; days and months, like the seasons, succeed each other. Summer, with all the joyous anticipations that could be produced by the warm and genial rays of the sun, and change of the season, has given place to autumn, and this to cold bleak winter. We are all anxiously waiting for spring-time to come, hoping for the best results with our bees. The bees I put in the cellar seem to be doing finely; the thermometer registers from 40° to 44°; they remain so quiet you can hardly hear a hum; most of my bees are packed on their summer stands in sawdust, as recommended by Mr. Heddon, and all seem to be doing well, except one colony, which seems to be afflicted with the dysentery. On Jan. 7, when the mercury registered 20°, the bees from this colony flew out and stained the snow badly, and many died. I am not able to attribute the cause of this colony being affected, while the rest seem to be doing well packed in the same way. Perhaps it is owing to their long confinement, as they have not been able to fly out since Nov. 20. I am very much pleased with the Weekly BEE JOURNAL, its value has greatly increased, and it is now indispensible.

Disco, Mich. E. W. WALES.

Queen-Rearing in Small Nuclei, etc.

Allow me to ask a few questions through the Bee Journal, which may benefit others as well as myself. First, I have been binding the Journals and other valuable papers myself with glue, which is not good. Will you or some of the readers of your Bee Journal give a receipt that book-binders use to paste the book cover to the book, so that it is durable.

2. On page 741 of Vol. 18, Bee Journal, Mr. G. M. Doolittle, says: "After using it a few years I ascertained that a winter that was favorable for outdoor wintering was not as favorable for cellar wintering, and *vice versa*, thus proving that the plan of mixed wintering was a good one. Again, if any one could tell just what the winter would be beforehand, I would place my bees in the cellar for a cold winter, and leave them out during a mild one." Will G. M. Doolittle tell us through the Bee Journal what the thermometer will record for a mild winter, and what for a cold winter; as I notice in the Bee Journal that there is from 6 to 8 degrees difference in the temperature between Mr. D.'s and here. The mercury was down to 6° below zero in the fourth week of January; for only two days.

3. On page 280 of Vol. 16, Bee Journal. "No one ever found fault with Quinby's queens, reared in boxes, containing 3 or 4 frames, 5x6 inches square. Is the rearing of queens in Quinby's method a safe and sure way to rear queens?"

Joseph M. Wismer.
Jordan Station, Ont.

[1. Book-binders use glue, but of much thinner consistency than that used by carpenters.

2. Mr. Doolittle is invited to reply to this.

3. No; the writer of that article distinctly states that these small nuclei were abandoned on "account of the liability of the bees to abscond, and the amount of attention required to keep them in fitness." You should have read the whole paragraph.—Ed.]

500 Pounds from One Colony.

I commenced the season, about June 1, with 30 colonies, almost destitute of honey; increased to 65, in fine condition for winter, and obtained 4,538 lbs. of honey (807 of comb, in 2-lb. boxes, and 3,731 of extracted); I have about 300 lbs. besides, stored away, and not counted in my report. My best yield from one colony was 486 lbs. of extracted. I think that I took enough comb honey from it, not included in count, to make over 500 lbs. I fed about 3 lbs. of sugar in spring, but the bees received no other help; got no increase. Time of extracting: July 5, 42 lbs.; 15, 26 lbs.; 21, 68 lbs.; 28, 75 lbs.; Aug. 24, 90 lbs.; Sept. 7, 105 lbs.; 19 and 20, 80 lbs. Had I used three instead of two stories for surplus, I think I could have obtained at least 600 lbs. I was crowded too much with other work to attend to it, as I should, or I could have made a much better showing for my bees. The cell producing this queen was obtained from a strong colony of bees which started only this one cell, during basswood harvest. Could I have another such a season (which was very poor at the commencement), and such a queen, I think that I could get 800 or 1,000 lbs. of honey. If cold weather kills bees (as I think it often does), we may look for considerable mortality among our pets next spring. The lowest temperature noticed here, so far, is 35° below zero; it was 29° below on Feb. 2, at sun rising; and away below, every morning since. My bees all answered to the roll call a few days ago, and seemed in good condition. I have them in a good dry cellar, with about 5 inches of leaves packed above most of them.

W. C. Nutt.
Otley, Iowa, Feb. 7, 1883.

A Smart Three-Year Old.

"It's a daisy; it's a daisy." Such were my exclamations on taking the wrapper off my Bee Journal, dated Jan. 31. My wife wanted to know what was a daisy, and after drawing her attention to the new coat the Bee Journal had assumed, she said it was "a pink." My little boy, 3 years of age, came running up and asked me what was a daisy, and after showing him the Bee Journal, said it was "real nice." By-the-by, you are not acquainted with my little son; well, when he was 2 years and 8 months old he could find a queen when caged. I claim he is the youngest bee-man known. He asks after his Journal weekly, and I have to read to him. I think now you have a Journal to suit the most fastidious. I, therefore, move a vote of thanks to you for the improvement.

S. G. Holley.
New Hamburg, Ont., Feb. 1, 1883.

[We are glad that now all are pleased with the Journal cover. But that "boy" is the brightest juvenile specimen yet heard of, and will "make his mark," as the years roll along. We were hardly prepared for "the news," that we were preparing reading matter to interest one so young as "under 3 years of age," as well as many who have seen over 80 summers. Give the little "chubby" a kiss for the editor.—Ed.]

Bees in Kentucky all Right.

Bees are wintering very well here. The coldest weather we have had since the first week in December, was 6° above zero, and the warmest was 64° above zero.

J. T. Wilson.
Mortonsville, Ky., Feb. 10, 1883.

Bees had a Flight.

Tuesday, Jan. 30, was clear and warm for the season, and my bees had a pretty good flight, and they needed it, for they have been shut in since about Thanksgiving day. Two light colonies, that I did not unite, are dead; the other 24 are in good condition, at present. I removed the caps from the hives, to let the sun shine in, to dry out the dampness as much as possible, and the bees are now in pretty good condition for another very cold snap. The weather here has not been so very cold, but steady, with no thaws until this week; there is not a great quantity of snow, but we have had some very good sleighing. I call it one of the most healthy winters, thus far, for a long time, and hope it will prove so for the bees.

R. Downs.
Naugatuck, Conn., Feb. 2, 1883.

Perfectly Satisfied.

I shall be perfectly satisfied in whatever way the editor "makes up" the Bee Journal. I bind my own Journals, and have just finished the volume of 1882. It is a nice work, and I would not sell it for $10.00, if I could not get another.

Wm. Bolling.
Dunkirk, N. Y., Jan. 26, 1883.

Honey Used by Bakers.

Have you noticed the fact that the bakers are using large quantities of extracted honey, in their business, lately? It is news to me. I see our bakery here has been buying largely from Mr. Muth, of Cincinnati.

G. B. Lewis.
Watertown, Wis., Feb. 13, 1883.

[Yes; they use it for cakes and pastry, of the best quality.—Ed.]

Feeding Bees in Winter.

In an article in the Bee Journal, the writer explains the way he feeds his bees in winter. I would like to know whether it is advisable to feed that kind of food in winter or not. I was afraid my bees would not winter very well, so when we had a thaw, the other day, I opened them and put under the sheet on the frames a cake of candy, made of the best white sugar, and which I think, with the honey they have in the comb, will last them until spring. I would like to know which is the best food for winter, syrup or candy? When I opened them they appeared to be in first-class condition, although I never saw them flying since the first cold snap in the fall. I winter them in the Jones hive, with inside packing.

Wm. H. Weston.
London, Ont., Feb. 1, 1883.

[We prefer the candy.—Ed.]

Motto—"Push and Progression."

I am highly pleased with the change in the "make-up" of the Bee Journal. Mr. Newman, you certainly deserve great credit, and the gratitude of your patrons, for your successful endeavors to bring the Bee Journal up to the very highest point of excellence. *Push* and *Progression* seem to be your motto. May long life and great prosperity be your reward. Many of the communications are each worth the cost of a year's subscription for the Bee Journal.

Reuben Havens.
Onarga, Ill., Feb. 2, 1883.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

◆

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

◆

Our Premiums for Clubs.

Any one sending us a club of **two** subscribers for 1883, for the Weekly, with **$4**, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For **three** subscribers, with **$6**, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For **four** subscribers, with **$8**, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For **five** subscribers, with **$10**, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., February 19, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—Extracted, dark 7c. light, 9c. here.

BEESWAX—It is quite scarce. I am paying 30c. for good yellow wax, on arrival; dark and off colors, 17@25c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—There is no excitement in the honey market, but sales are fair to our regular trade. Offerings are plentiful of extracted and comb honey. Extracted brings 7@9c. on arrival. The sales of comb honey are very slow, although there is a large supply of first-class quality on the market. It brings 12@18c. on arrival.

BEESWAX—Comes in slowly and brings 20@30c. per lb., according to quality. CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The past month has not reduced the stock of comb or extracted honey, the receipts having been larger than the amounts taken for consumption. Prices are weak and irregular, ranging from 16c. to 18c. for white comb in the smaller frames; dark, very little selling, offered at 12½c. to 14c. Extracted, 8c. to 10c., according to color.

BEESWAX—32@33c. per ℔. for good.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—Market is extremely dull. For comb of ordinary quality it is almost impossible to find buyers. Good comb, of sage blossom, is offering at 13c.

White comb, 14@17c.; dark to good, 11@13c.; extracted, choice to extra white, 8½@9½c.; dark and candied, 5@7½c.

BEESWAX—We quote 25@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Very quiet; dull. Comb at 14@16c., strained, at 6½@7½c., extracted at 7¼@8½c.—lots in small packages, more.

BEESWAX—Steady at 28@29c. for prime.

W. T. ANDERSON & CO., 117 N. Main Street.

CLEVELAND.

HONEY—Is very slow, just now hardly anything selling, stock on hand quite liberal. Sales slow at 19@20c. for best white 1-lb. sections; 18@19c. for 2-lb. Second grades not inquired after. Extracted very dull at 9@10c. in bbls. and 11@13c. in cans.

BEESWAX—Scarce, 28@30c.

A. C. KENDEL, 115 Ontario Street.

NEW YORK.

HONEY—Choice to fancy white clover honey continues scarce and firm, but buckwheat and extracted honey slow and irregular.

We quote: White clover, first quality, 1 ℔ boxes, 24@25c; fair to good, 22@23c.; buckwheat, 15@17c. Extracted, clover, 10@13c.; buckwheat, 9@10c.

BEESWAX—There is only a moderate supply of beeswax and prime lots held firmly.

Western pure, 30@32c; southern, pure, 31@33c.

D. W. QUINBY, 105 Park Place.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—Our supply is gone; we have none to quote.

CROCKER & BLAKE, 57 Chatham Street.

◆

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Convention Notices.

☞ It seems as if we were getting behind in this part of Iowa, by not having a convention. On consultation with a few bee-keepers, it was agreed to call a meeting on Feb. 24, at 2 o'clock, p. m., at Columbus Junction, Iowa, to consider the practicability of organizing a Bee-Keepers' Society in Louisa county. D. RAWHOUSER.

◆

☞ The Union Bee-Keepers' Association will meet in Grange Hall, Eminence, Ky., on Thursday, April 26, 1883. All bee-keepers, and the public generally, are invited to be present.

G. W. DEMAREE, *Sec.*
Christiansburg, Ky.

◆

☞ The Texas State Bee-Keepers' Association will hold its Fifth Annual Convention at McKinney, Collin Co., on Tuesday and Wednesday, April 17th and 18th, 1883; at the residence of Hon. W. H. Andrews.

WM. R. HOWARD, *Sec.*
Kingston, Texas.

◆

☞ The next meeting of the Haldimand, Ont., Bee-Keepers' Association will be held at Nelle's Corners on Saturday, March 31, 1883, at 11 a. m.

H. CAMPBELL.

◆

☞ The Western Bee-Keepers' Association meets at Independence, Mo., April 28, 1883.

S. W. SALISBURY, *Sec.*

◆

☞ A bee-keeper from Sweden has just arrived in Chicago with a letter of introduction from Mr. Stalhammar, editor of the Swedish bee paper. He endorses him very strongly, and wants us to find him a place to care for bees. If any of our bee-keepers want such a hand, it will be appreciated if they will write to us. He speaks but a few words of English, but is a very healthy-looking man.

◆

☞ Articles for publication must be written on a separate piece of paper from items of business.

HELP WANTED!!!

An apprentice, or a partner, to join me in raising **Bees and Honey** on an extensive scale. The right person can, at the start, have a half interest in 150 or 300 colonies, depending on qualifications. For details, apply by letter or otherwise, to

M. M. BALDRIDGE, St. Charles, Ill.

1883. **1883.**

YOU GET VALUE RECEIVED!

QUEENS, BEES AND SUPPLIES

If you want **EARLY QUEENS** from the best improved **genuine** stock for business; or if you want Imported Italian Queens or bees, in full colonies or nuclei, with tested or untested queens; if you want Dunham or Vandervort comb foundation, made from **pure** beeswax; or if you want hives or apiarian supplies of any kind, send for my new catalogue. It tells you about introducing queens, new "Races of Bees," etc. Cash paid for clean beeswax. Address,

J. P. H. BROWN,
Augusta, Georgia.

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OLDEST BEE PAPER IN AMERICA
THE AMERICAN BEE JOURNAL
ESTABLISHED IN 1861

VOL. XIX. CHICAGO, ILL., FEBRUARY 28, 1883. No. 9.

OLDEST BEE PAPER IN AMERICA
THE AMERICAN BEE JOURNAL
ESTABLISHED IN 1861
Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR,

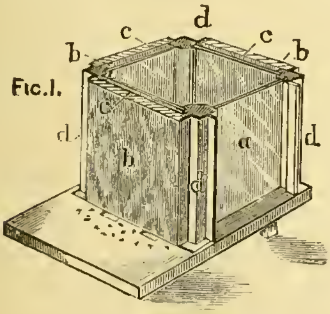
Hives for Observation.

It is our aim to make honey a staple product. To this end we have endeavored to popularize the consumption of honey by the masses, as well as to raise the standard of production, by applying correct principles and progressive art to the management of the apiary.

Public manipulations with bees and magnificent honey exhibits are the most attractive features of State, County and District Fairs. There are many good reasons for introducing such, but the chief one, perhaps, is that those who produce honey for the market may be induced to present it in the most marketable shape; for the new methods and new ideas of practical management must take the place of the old and undesirable ones.

At the American Institute Fair, in New York, in 1877, Dr. Worrall exhibited a colony of bees in his hive, the brood chamber of which is shown in the engraving. It has glass sides all around, and it was a great attraction. Prof. Hasbrouck. Mr. Locke and others, also exhibited bees in observation hives.

FIG.1.



DR. WORRALL'S OBSERVATION HIVE.

Bees and honey are already the great attraction at such Fairs as have given prominence to this industry—and this will become more apparent each successive year. Michigan, Nebraska, Missouri, and some other States, have tried a small Bee and Honey Show, and the results have been so satisfactory, that they are now intending to have them on a much larger scale.

When in Great Britain, during the summer of 1879, we found that the most attractive features of the Fairs were the public manipulations with bees, and the very large exhibition of honey of captivating beauty. For exhibiting bees, observation hives were used—those having glass sides, through which the bees may be seen at work—the hives being inside the exhibition building, with a tube covering the entrance, and running through the side of the building, giving free passage, in and out, for the bees. Sometimes, a glass box inclosing each frame, arranged like leaves of a book, with a common entrance to all of them, from the tube running through the side of the building, is made to exhibit bees. This gives an opportunity for thorough examination of the whole colony.

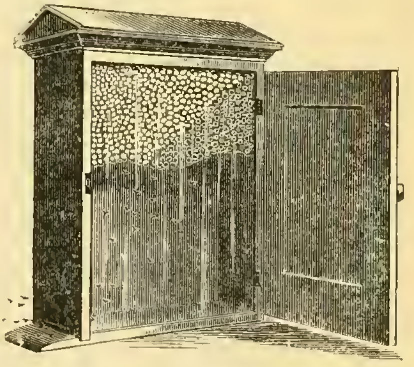
Prof. Cook has one of the latter kind in his study, and, by request, he has sent us a drawing of it, from which we have made the illustration, so that our readers will obtain a good idea from it and the accompanying description given by the Professor:

OBSERVING HIVES.

Of course, every live bee-keeper will possess and read one or more of the books that treat of bees and their management. These place the whole subject before him, and, if well indexed, enable him to study any particular phase of the subject at will. He will, also, if wise, take and read one or more of our excellent periodicals. These keep him versed in the progressive steps in his art, and the various discoveries and improvements can be appropriated as soon as made.

There is still another method to gain knowledge, which though, perhaps, not so full of practical aid as the above, will greatly benefit, even on the practical side of our business; but, more than this, it will enable us to confirm what we learn from the books, and will do more than anything else to exalt our appreciation of the wondrous habits and instincts of the little insects with which we have to do. It will do much to make our life work as full of wonder and admiration as it is of pleasure and profit. I refer to the possession of an "Observing Hive;" so that, with each leisure hour, we may look into the very life habits of our pets. Such observation, in any field of natural history, always excites interest, imparts instruction and ennobles the observer.

Few experiences in my life have yielded more real pleasure and valuable instruction, than the hours spent in watching the strangely interesting labors of the bees, as studied in my library, by use of the small "observing hive," here illustrated.



PROF. A. J. COOK'S OBSERVATION HIVE.

I do not think we need any complex arrangement. A simple, uni-frame hive, with glass sides, which may be darkened by doors, is cheap, easily made, and will enable us to watch any operations carried on in the hive. I have even had bees in such a hive prepare to swarm. Of course, such limited quarters will not permit much increase, and so, when the brood commences to hatch out, the bees must be shaken from the frame, and it replaced with a frame of empty comb, or, better still, a frame of comb foundation. We then can watch the bees as they transform the foundation into a sheet of beautiful comb. If the bees are not gathering at the time of this transfer, we must either feed them, or give them a comb containing some honey. We may now watch, not only the wondrous fashioning of the comb, but the laying of eggs, the packing of pollen, the finding of the larval bees, and the many other wonderful manipulations, to be witnessed in the "Observing Hive."

My hive, which is correctly represented in the engraving, is neatly made of black walnut, and forms, of itself, quite a pretty ornament in my study; while, with its wondrous contents, it forms an attraction which can hardly be surpassed. It will pay every apiarist to keep such a uniframe hive, for his own edification, the instruction of his children, and the entertainment of his friends.

◆

Bees' Tongue Register.—We have received, from Mr. John H. Martin, one of his improved Bees' Tongue Registers. We notice that he has reconstructed and simplified it during the past year. As it registers by hundredths of an inch, it is a very useful article by which to measure the length of the tongue of bees, so as to determine those best fitted for collecting the nectar from red clover or other honey-producing plants which have a deep secreting cell. This is a step in the direction of "breeding the best bees," and we welcome Mr. Martin's invention as very useful and eminently progressive.

◆

☞ A beginner, J. L. H., fed the bees sugar syrup while they were out for a flight on Feb. 16, and says that they had a fight, some being killed by those of the same colony, and then asks: "Why is this?" Feeding the bees in the open air close to the hives, is always dangerous, and might have caused "robbing" to such an extent as to have given the beginner a "very dear lesson." He has two colonies each of black bees and Italians, and adds, "the Italians did not come out much." The angered bees were blacks (perhaps, hybrids), and, no wonder that they were on the rampage. They had feasted on the syrup, become angry because there was no more, and then fought over it.

◆

☞ The Baroness Burdette-Coutts, who is not only the richest lady in the world, but the most liberal one, and who is also the President of the British Bee-Keepers' Association, gave a New Years' dinner to eight hundred of her tenants, and afterwards personally presented a gift to each one of her guests.

Average Intelligence About Bees.

Mr. H. R. Boardman, E. Townsend, O., sends us the following from *Good Words*, which is now "going the rounds of the local press:"

Honey is, as a rule, very sweet and fragrant, but it is sometimes injurious to human beings. Here I may mention that no bee can suck honey out of flowers, as is popularly supposed. She licks it out with her tongue, the end of which is covered with hairs, so as to convert it into a brush, scrapes it between the jaws, and so passes it into the crop where it is changed into honey. What property may be in the crop which converts flower juice into honey, we do not at present know. To all appearance, the crop is nothing but a bag of exceedingly-fine membrane, and yet, after remaining for a little time in the crop, the flower juice undergoes a change of consistence, flavor and scent, and whether the insect is a wild or domestic bee, the change is identical throughout.

Mr. Boardman very aptly remarks that this demonstrates "how rapidly we are advancing in the knowledge of bee-culture, especially as promulgated by the average newspaper. It is too good to be lost. If knowledge were bliss, 'twere 'folly to be wise.'"

◆

Honey Wine.—The Clarke Co., Va., *Courier* has the following:

Mr. J. Luther Bowers, a bee-keeper of this county, has presented us with a bottle of honey wine, the preparation of which was very simple, the only ingredients being honey and water. It was very palatable. From 51 colonies of bees he realized, last year, 1,280 lbs. of choice comb honey, 1,200 lbs. of which he sold for $240. One colony furnished the enormous yield of 153 lbs., which, at the price he received for his honey (20 cents per lb.), brought $31.60, or nearly as much as two acres of wheat. The value of such a colony reaches beyond $100, and shows what energy and improved methods will accomplish. Mr. Bowers prefers to use the 1-lb. sections, as honey in that form commands a better price and sells more readily.

◆

☞ Letters and communications have accumulated so much that we give up the space this week to an extra quantity. Several long reports of conventions are waiting, but we give the communications a chance this week, before they get too stale.

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☞ We have received a copy of "The Simmins Method of Direct Introduction," a pamphlet of 28 pages, on introducing queens, detailing his methods and management, and may be had of Samuel Simmins, Rottingdean, Brighton, England, for 15 cents.

Answering Questions.—Mr. Heddon, Dowagiac, Mich., writes as follows:

I desire, and expect to be able to answer all questions pertaining to business transactions; that I must do as a duty, and I would not like to have it otherwise understood. But I have a host of long, pastime letters, mixed all through with questions regarding bee-culture, but I cannot possibly answer them all, and do the other work allotted to me. I will answer all questions sent direct to me, or to the bee-papers, on separate sheets, with spaces left for answers. JAMES HEDDON.

Questions for Mr. Heddon to answer, may be sent to us, or to him direct, and they will be promptly answered in the BEE JOURNAL.

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New Catalogues and Price Lists.

We have received the following new Catalogues and Price Lists of Bees, Queens or Apiarian Supplies:

Dr. J. P. H. Brown, Augusta, Ga.
Naramore & Wood, N. Lansing, Mich.
Richardson Bros., Port Colborne, Ont.
Edward B. Beebee, Oneida, N. Y.
Wm. W. Cary & Son, Colerain, Mass.
W. P. Henderson, Murfreesboro, Tenn.
Wm. Ballantine & Son, Sago, Ont.
J. D. Goodrich, East Hardwick, Vt.
E. T. Lewis & Co., East Toledo, O.

SEED AND PLANT CATALOGUES.

Wm. Rennie, Toronto, Ont.
J. A. Everitt, Watsontown, Pa.
F. E. Fassett & Bro., Ashtabula, O.
Chas. A. Green, Rochester, N. Y.
I. F. Tillinghast, LaPlume, Pa.

Also, Crawford's Strawberry Culture, Cuyahoga Falls, Ohio.

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☞ Several correspondents ask if it is essential to write only on one side of the sheet of paper when preparing an article for the JOURNAL. For us, it is just as well to write both sides, and saves postage in sending it.

◆

Our Premiums for Clubs.

Any one sending us a club of **two** subscribers for 1883, for the Weekly, with **$4**, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For **three** subscribers, with **$6**, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For **four** subscribers, with **$8**, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For **five** subscribers, with **$10**, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

CORRESPONDENCE

For the American Bee Journal.

How Shall We Report?

G. M. DOOLITTLE.

On page 58, Mr. F. H. Finch takes exception to "those large yields published," and thinks they were "not weighed on standard scales." Also, on page 60, S. J. McKennie says, "I have the highest respect for intelligent and scientific statements, but no relish for exaggerated statements," and by the editorial note at the close of Mr. K.'s remarks, I see that you, Mr. Editor, are not just clear as to how a report should be made out. I once reported 566 lbs. in one season from 1 colony of bees, hence, I would be classed by Mr. K. as one of those "who exaggerate," and by you, Mr. Editor, as being one of those whose "statements are unfair, and mislead the unsophisticated." As I have never intended to be "unfair" or "mislead," perhaps it were well to look into the matter regarding how a report should be made out.

I had supposed it fair to give a report based upon the "spring count" of colonies in a yard, dividing the total production of honey during the season, by the total number of colonies in the spring, and qualifying by saying they increased to such a number. However, I now see that Mr. K. does not consider this as fair. But, supposing they do not increase at all, as was the case with Mr. Carroll's colony that gave the 800 lbs., would it then be fair to report 800 lbs. from one colony. The editor says not; for, in his case, he used "3 or 4 ordinary hives by extra stories one over another," thereby making his report "unfair and misleading."

But, again, supposing they did not increase at all, and were kept in a single story hive, as was the case with the colony which gave me the 566 lbs. Would it then be unfair to report that amount as the production of one colony? Although I listen intently, I hear no one say "unfair." Well, if the same number of bees, all the production of one queen, make the same number of pounds in 2 or 3 ordinary hives, by extra stories being placed one over the other, I cannot see why it should be more unfair than the other.

Again, if the bees swarm and are hived in a separate hive, and none of the young or second queen's bees are old enough to labor in the field, I do not see how it should be unfair to report the product of the two the same as if they had remained in one hive. The reason why these "big reports," as they are called, are considered "exaggerated," is, that those calling them such, think as does Mr. K., that 20,000 to 25,000 bees constitute a colony. If we make 20,000 bees a standard from which to report, as does Mr. K., probably Mr. Finch will have no need of offering his $500 for some one to instruct him how to have his bees make one-half as much as some report, for his 20,000 bees will secure nearly or quite as much as will 20,000 of Mr. Carroll's.

In the spring of 1877, I selected an ordinary colony of bees, and set it apart for extracted honey. This colony was no better than one-third of my yard would average, and was not helped in the least from any other colony. I built them up as fast as possible, by the means I usually employ, which I gave in my series of articles during 1882. By the time apple trees were in bloom, the queen had brood in 12 frames, and from that source I extracted 16½ lbs. A few days after this, the 12 frames, bees and all were set into a hive 4 feet long, and a division board placed at the rear of the combs. Once a week two more empty combs were inserted in the centre of the brood-nest, until the hive contained 20 combs well filled with brood. As white clover was now yielding honey, the hive was filled out with frames of empty combs, which numbered 32. I did not expect the queen would occupy any of these last 12 combs, but in this I was mistaken, for before white clover was through yielding honey, I found brood in every one of the 32 combs, which, if placed compactly together, was fully equal to 15 frames full of brood. Each frame gives 100 square inches, and each square inch gives 50 worker bees, hence, there were 5,000 bees to hatch out of each of these frames every 21 days, or 75,000 from the 15 frames.

The average life of the bee, in the work season, is 45 days, hence, it will be seen that the queen can place two and one-seventh generations of bees on the stage of action, to where one generation dies off. Two and one-seventh times 75,000=160,700, as the number of bees in that hive during the basswood yield. It was a sight worth beholding when they were just starting for the field in the morning, for they would rush out like an army, and then, later, the entrance would be one living mass going to and fro. From clover, they gave 186 lbs.; from basswood, 287½ lbs., and from buckwheat, 76 lbs.; making 566 in all. Now, if we were to call 20,000 bees a colony, this would give but about 71 lbs. per colony, and I do not think either of the correspondents would be willing to call that an exaggerated report.

Thus, it will be seen that all these conflicting reports can be harmonized, when we understand how many laborers there are to perform the work. As I have said before (and it will bear repeating), the main secret in getting a large yield of honey, is to get plenty of bees, just at the right time to take advantage of the honey harvest. If you understand your location, and get your bees as above, you will have no cause to complain of your yield, if the flowers secrete honey.

Borodino, N. Y.

[Reports had been "going the rounds" simply stating that from 800 to 1,200 pounds of honey had been obtained by one colony in Texas or somewhere else. No matter what explanations were made when the report was given, the statement was divested of details, and reiterated as "a good story" to tell, being so unreasonable that no one would believe it. Of course, it was understood that it was an *ordinary* colony; this led Mr. McKennie to figure it out (in his letter on page 60), and that "figuring" we desired to correct in our foot note, by saying that such colonies were "doubled up to the capacity of 4 or 5 ordinary hives, by extra stories, one over another"—that the colony was *not an ordinary*, but an *extraordinary* one! It will easily be seen that to those laboring under the idea that a colony of the usual size was spoken of, the statements *were* "unfair," "misleading," and "unreasonable." This was the idea we intended to convey, but, perhaps, we were not sufficiently explicit, and have, therefore, been misunderstood. We certainly never thought of reflecting upon any one's report, as some have presumed. We hope this will be sufficiently clear and satisfactory.—ED.]

For the American Bee Journal.

Moving Bees on a Hand Sled.

G. F. WILLIAMS.

During the fall of 1880, about two weeks after our severe winter began, I moved 9 colonies from my father's, a distance of two squares, on a hand-sled, to my own home.

The entrances were partly clogged with ice, and the bottom boards were very icy. So, thinking it best to give them a nice, dry one, as well as to protect them above, I carried them into the kitchen, removed the bottom boards, putting dry ones in their places, put a piece of thin cloth over the frames of each, on which a chaff cushion was placed, using during the operation, a smoker, when necessary, to keep the bees in the hives.

Eight of these were carried into the cellar and one put out of doors, protected by placing a store box over it, and filling the intervening space with sawdust. Of the 8 in the cellar, only 1 seemed to suffer harm from the moving; large numbers dying and clogging the entrance, which was removed about every week.

Early in March, they were all carried out for a flight, and again put back. Towards the latter part of March, they were again carried out for a flight, and not one returned. The one spoken of above and two others soon dwindled, leaving plenty of brood and eggs. The one left out all winter came through strong and healthy.

I am of the opinion now, knowing little of bees then, that if I had not removed them from the cellar for three or four weeks, two would not have dwindled.

Farmers about here, who wish to move bees, always move them in the winter. It is now a wonder to me, since I have read up on improved bee-culture, that any of the 9 lived through the long and tedious winter, and I hope no one will be so unwise as to move bees until warm weather. I, for one, shall not, at least until we have a great deal more knowledge of the "busy bee" and dysentery.

New Philadelphia, O.

For the American Bee Journal.

Central Illinois Convention.

The Bee-Keepers' Association of Central Illinois met according to previous announcement.

A large number of bee-keepers of McLean and adjoining counties assembled at the surveyor's office, in the Court House, in Bloomington, on the 10th inst.

Officers elected for one year: President, J. L. Wolcott; Vice President, Mrs. F. A. Baller; Secretary, James Poindexter; Treasurer, O. Barnard, all of Bloomington.

Owing to the lateness of the hour appointed for the meeting, the time was principally occupied in perfecting an organization and getting the Association in working order.

Thirty-two names were enrolled. It was decided to hold meetings quarterly. Adjourned to meet the second Wednesday in May (9th), at 10 o'clock a. m., in Bloomington, at same place.

JAS. POINDEXTER, *Sec.*

For the American Bee Journal.

The Eyes of a Bee.

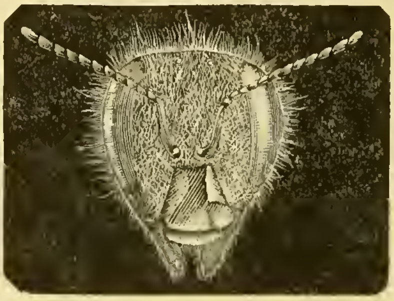
C. THEILMANN.

In examining the heads of bees with the microscope, I found the sides, which appear to the bare eye as if the high brown spots were the eyes, but found these two spots, all thinly covered with hair, without any glassy, bright or clear spot whatever, and the skin or outside covering appears like grained leather, when looking with the bare eye. Looking closer, with head three little, round, glassy, skinny the microscope, I found on top of the spots, one is in the centre, a little ahead of the two, which are one on each side; there are no hairs close around these spots, but a bunch of hair between the three, and the head has to be held in a certain position, in order to see all three at once. If these three spots are not the eyes, where are they? I have examined spiders heretofore, and found from four to six of such little glassy spots on their heads, which I would call eyes.

My bees have been closed up now for over three months, without a flight, as it has been cold ever since, with over 2 feet of snow, and for the last six weeks the mercury has registered from 10° to 40° below zero, in the morning, except the last few days, when it showed 32° above. My bees outdoors (30 colonies) need a flight, as some of them have the dysentery. My 130 colonies in the bee-house got a little uneasy, these warm days, as the temperature in it went up to 65° with ventilator all open, and the main door open, its whole width, one whole night. This morning all is quiet, as it is 13° below zero outside; no dysentery appears in my bee-house yet.

Theilmanton, Minn., Feb. 17, 1883.

[The large eyes which you saw without the microscope, are the compound eyes; the three small ones are the simple eyes, as shown in the accompanying engraving of the head of a worker bee, magnified.—ED.]



For the American Bee Journal.

The Standard Langstroth Hive.

M. M. BALDRIDGE.

Having shown on page 55 of this JOURNAL that the standard Langstroth frame is 18⅜ inches long instead of 18⅝ inches, outside measure, I now desire to say a few words about the standard Langstroth hive. The standard hive, as I understand the matter, should have 10 standard Langstroth frames—no more and no less—that being the number given and recommended by Langstroth in his work on bees—the highest and only authority to follow. Now, Langstroth makes the hive, or outside case, to hold 10 frames, precisely 14⅛ inches wide, inside measure, but I find, in practice, that it is not necessary to make exactly that width of hive for 10 frames. I make the hive 14 inches wide to avoid the fraction, and find many times that I can use even 11 frames just as well as 10 in that width of hive. In fact, the combs will, other things being equal, be built straighter and nicer with 11 frames than with 10. I therefore find that a hive 13½ or even 13 inches wide, inside measure, will answer for 10 frames, but to have Langstroth hives, of standard size, we must adhere as closely as possible to the length, width, and depth, inside measure, as given by Mr. Langstroth, or else we may as well quit talking about standard hives.

But there are quite a number of bee-keepers in the United States and elsewhere, who are to-day far in advance of Mr. Langstroth, in some respects, in practical experience (and when I say this I mean no disrespect to Mr. L.), who prefer the 8-frame hive, with standard frames, to the 10-frame hive. They have used both sizes of hives, side by side, in the same apiary, and claim that they have uniformly secured better results from the smaller hive. Now, that being the case, it is folly and waste of time to try to induce all bee-keepers to use the Langstroth standard hive, although they might be willing to use the standard frame. From what has now been said, the reader will please observe that the standard hive and the standard frame are by no means synonymous terms.

It has been suggested that bee-keepers should hold a convention to see if they cannot in some way agree upon some standard hive to adopt. Now, to simplify matters, let me suggest that it might be far better, and less expensive, for bee-hive makers to agree among themselves to make the standard Langstroth frame of the same length and depth, both outside and inside measure, and the outer box or case of the same length, depth and width, inside measure, the width depending on the number of frames to be used, whether that be 8 or 10, more or less, the main object being to make the frames interchangeable. Bee-hive makers are the proper parties, so it seems to me, to agree upon such matters, as Tom, Dick, Harry and old-man Bungler have no more business to make bee hives, honey boxes, foundation, hives, etc., of modern construction, than has the former to make wagons, reapers, threshing machines, etc. As a rule, every branch of business is, or should be, carried on as a specialty, and bee-culture is, or should be, no exception. Bee-culture, however, has several distinct branches, and there are men so organized as to carry on two or more of them at the same time very successfully. But, in general, it will not pay bee-keepers to try to run all the branches as specialties at the same time. That being the case, the majority will find it better and more profitable to purchase certain supplies for their apiaries from specialists. I may be mistaken about this, but think not; it having been my experience for nearly a quarter of a century. And, to get the best results, two or more bee-keepers should club together in ordering supplies, and thus secure the lowest possible prices.

As I am not now engaged nor interested in furnishing "supplies for the apiary," and do not again expect to be very soon, it will not, therefore, be necessary for any one to impute improper motives to any of the statements set forth in this article.

St. Charles, Ill.

For the American Bee Journal.

System in the Apiary.

A. E. FOSTER.

"A place for everything, and everything in its place." I know of no place (unless it is in the family) where this rule should be followed more closely than in the apiary. The prosperous bee-keeper is always in a hurry, needing different supplies as he examines different hives, and it is very necessary that he should know just where to find things as he needs them.

If you have not this faculty well developed, cultivate it, by assigning everything in your apiary a place, and keeping everything in its place. The time lost in hunting "here, there and everywhere" for what you need, will amount to a great deal, more than any one would suppose; and it will not only save time, but keep you from getting in a bad humor, which generally follows one of those long searches. The mother who teaches her child to put things where it gets them, does the child good, and saves herself much trouble, in picking things up after it.

My bees are wintering well on the summer stands.

Covington, Ky., Feb. 14, 1883.

For the American Bee Journal.

Moving Bees in Winter.

R. M. DENHAM.

As some desire instructions about moving bees, and having had a little experience in the matter, I will tell what I know about it. I purchased two colonies of bees in box hives, of a neighbor, in the winter, and desiring to move them, when the snow was on, I put into the sled bed an armful of hay on which to set the hives. Sometime before this, I had read Quinby's "Mysteries of Bee-Keeping," in which I found instructions on this point, and I desired to follow him. He said, when moving bees (in box hives), turn the bottoms upward, and place a sheet or something of that kind over the hives, to keep the bees from flying. My neighbor was an old man, and had kept bees (in box hives) many years, and, of course, thought he knew more about how to manage the thing than I did; consequently, he pushed the hay to one side and set the bees flat on the bottom of the sled bed, bottom down. I suppose he thought it would not be wholesome for the bees, to turn their heads down. I said nothing, however, but started home. The road was quiet rough in places, and the bees were considerably jolted, drive as carefully as I could. I had not gone far until I discovered that some of the combs were broken; this was a swarm of the previous summer, and the combs were tender and easily broken, and before I got them home, the combs were all broken off, and the whole "business" was lodged in the bottom. The other hive, being full of old combs, stood the jolting without breaking. This cured me of ever again hauling bees on a sled; though, I believe, had Mr. Quinby's instructions been followed, the combs would not have been broken.

Of course, moving bees in frame hives is a different thing, as the bottom bar, if the combs are built down to it, support them. I would always haul bees, short distances, in a spring wagon, and place the hives so that the combs would stand crosswise with the bed. I have moved bees this way, in the honey season, without damage.

This winter, in this locality, has been quite favorable one for bees, when they had sufficient stores, as the thermometer here has not been below zero. I gave my 12 colonies sugar-syrup, made from the best grade of coffee A sugar, sufficient to winter on, and they are doing very well. I placed 8 of them in a clamp, and left the rest on the summer stands.

The future prospects for bee-keepers here are, I think, good, as there is an excellent crop of white clover on the ground, and we usually have a good crop of locust bloom, which comes in shortly after fruit bloom.

St. Clairsville, O.

For the American Bee Journal.

Sections, Separators, Etc.

F. C. BENEDICT.

It is with interest that I read the different articles on half-pound sections, separators and their use. It seems to me that a novice or any one who contemplates their use would be so confused they would hardly know whether there was a size known that would hold the required amount. Some talk about narrow sections and straight combs, without separators. Let us look into the brood chamber of a good colony and see the combs. Straight! Yes, beautiful combs as I ever saw; take the same combs after a good honey flow, and how are they? Instead of being 1½ inches thick as we would like them (and about the thickness we find them when left to their own ways), the bees have built the top of this one a little thicker, contracted the next, no two straight and perfect. Why! because there are no separators to guide them, and they will expand one and contract another. Now, this will be found the same in the surplus arrangement, and let the section be so narrow that they must make their combs less than 1½ inches, and greater will be the disappointment to those who shall use what might well be called the wafer sections, without separators. Some of the sections will be so thin they will be of no value, while others will be built into sections adjoining, making it hardly possible to get them in marketable shape. The only safe way would be to carry them single-handed and place them upon the consumers, table.

Some may think me taking a bold stand, when I state that I hold, that no one (I care not who) can manipulate 100 colonies of bees for comb honey, and produce it in first-class marketable order, whether it is to be glassed or unglassed, without the use of separators of some kind. Some contend that separators lessen the crop of surplus, but it is only a delusion under which some labor who are not up to the times in producing comb honey in perfect shape by the right use of separators. I know of what I speak.

A short time since I was upon the market of one of our large cities, where I saw tons of honey, and upon the cases I saw the names of some of our noted apiarists; nearly all were from the West, and produced without separators, and put upon the market without glassing. All were leaking more or less, some so badly that the honey had run from top to bottom of the piles and granulated in streams as large as your finger. Why! because some of the combs were over thick, and chafed in the cases. Now, had the producers of that honey done their part, as well as nature and the bees did theirs, they might have realized 3 to 5 cts. per pound more for their product. This would far more than pay all expense of putting it upon the market in first-class order, rather than third or fourth class, as was some of the above.

Now, if we are to use half-pound sections, why not let those who contemplate trying them make a section that can be used to good advantage with the surplus arrangement at hand, and not be to the expense of new racks, frames, etc. If we must have different-sized fixtures for each sized section, what a collection of unnecessary traps will soon be on our hands. After three years' experience I find that a section, to hold ½ lb. of honey, must contain 17½ cubic inches, whether one thickness or another. Then adjust your section to your surplus fixtures on hand. Have your 1 and 2-lb. sections the same height, so that you can use the same width separator for both sizes. In short, have just as few extra fixtures as possible, for it increases the expense and takes off the profits. I manipulate sections in racks, and one-sized rack answers for the 3-sized sections with only extra separators for half-pound sections; one sized shipping case for 1 and 2-lb. sections.

Perry Centre, N. Y.

For the American Bee Journal.

Wood Separators and Bee Glue.

C. R. ISHAM.

In the BEE JOURNAL (page 95), Mr. James Heddon, in an excellent article on Surplus Cases, etc., makes the following request: "I wish Mr. Isham would send me a sample of his wood separators, and tell us, through the BEE JOURNAL, how he puts up with or avoids the glue difficulty spoken of above." I have sent Mr. Heddon a sample, for practical experiment, and the readers of the BEE JOURNAL will get the full benefit of his conclusions. As to "gluing up the less than bee spaces," I would say, as this space, when tin is used, remains open until closed with propolis by the bees; that it is not any more work to scrape off a thick than a thin chunk of glue, consequently I do not find much difference in cleaning the sections, whether thick or thin separators have been used. Those ⅛ inch in thickness (and also, if desired thinner ones), can be notched out so as to come down to the bottom and yet let the bees pass up. In my own arrangements I prefer to have pieces cut from separator material of just the proper size, they being of same thickness (1-16 of an inch), to fill spaces at ends of the sections above the separators, for, when the rack is filled and clamped, they can be quickly put in place, and you have a neat job, with all outside spaces nicely closed.

After putting the rack or case upon the hive, have a piece of enameled cloth, cut the proper size, to smoothly lay over the sections, and on top of the cloth place a quilt or piece of burlaps, and cover all with a flat board, fitted for the purpose. You now have a chamber for surplus storing which fully meets all the requirements of warmth, so necessary for comb building, early or late in the season, and violate no "scientific principles laid down by Langstroth."

In a case of sections thus arranged, the combs are of evener thickness, with a smooth face, which gives the honey a much finer and more attractive appearance then when dented and bulged, as is likely to be the case where metal separators are not used. As wood is warmer than metal it economizes the heat of the hive which is the first great principle to be taken into consideration in making arrangements for obtaining surplus honey.

Peoria, N. Y.

For the American Bee Journal.

Was That Bad Advice?

DR. G. L. TINKER.

It is really bad advice, or rather, it is impracticable to set a rack of the thin sections down on the brood frames? Mr. Heddon so implies, see page 95 of the BEE JOURNAL, and expresses great "surprise" that I should give such advice. Now, I am not less surprised that a man of the experience and ability of Mr. Heddon as a practical bee-keeper, should "warn all beginners" against the advice, giving as his objections to it that he had "been through the mill and graduated," and that it would be "violating the instincts of the bees," and be resented by "their glue and stings." Surely, it is not against the instinct of the bees to have continuous passage ways from the brood combs into the sections. Neither can there be any trouble of any consequence on account of propolis, nor special danger over any other plan because of stings.

Several apiarists of large experience have assured me that the plan suggested on page 72 of the BEE JOURNAL, is thoroughly practical. Not only so, but it is quite possible that in no other way can the half-pound section be made to pay the producer.

The writer has not taken a fancy to the half-pound sections with a view to using them by any of the ordinary methods in use for getting comb honey in the 1 and 2 pound sections. On the contrary, it seems to me that its failure as a financial adventure to the producer by these ordinary methods, is already a foregone conclusion.

There are other advantages from placing a rack of sections down on the brood frames than those already given, and among the first of these is the readiness by which the bees can be got to work in all of the sections at once. This is accomplished by putting on the first rack of sections with a narrow strip of foundation fastened upright to the bottom of the section instead of being fastened to the top piece. The bees will go to work in the sections the instant there is enough honey coming in, and build the comb upwards, which they seem able to do just about as fast as to build it downwards. The next rack of sections may contain full sheets of foundation, if it is desired, and fastened to the top of the section as usual.

New Philadelphia, O.

For the American Bee Journal.

New Method of Wintering Bees.

JOHN E. VAN ETTEN.

Any one can get along with bees in summer, but the great problem is how to winter them successfully; and for want of appliances, if for no other reason, out-door wintering must ever prevail with the million.

Some advise that bees should be placed in a cellar and kept dark. I tried this in a very dry, sandy cellar, with a cement floor, and yet with very disastrous results, arising from dampness and mold, which I find to be the greatest enemy of bees, especially in winter.

Others advise that they should be placed on the north side of a building or fence, so as to exclude the sun, and thus prevent them from flying out and becoming lost. I have also tried this with very fatal results.

Others advise placing them low down on the ground and letting the snow drift over them. This is sure death from the dampness generated from the melting snow.

Others advise covering with enameled cloth, packing in chaff, etc. These are all objectionable, because they absorb and hold dampness, which is dreadfully fatal to bees in winter, while they are in a dormant state and unable to ventilate the hive in their own natural way.

After years of trial I became convinced that all such theories were vicious and wrong in principle, and contrary to the natural requirements of the bee; that cold was not so much an enemy of bees in winter as dampness; that instead of being placed low down on the ground or in some bank, where all the dampness could be thrown into the hive, the hive should be elevated so that the winds could sweep away such dampness as might gather around it; that, instead of being kept dark in winter, the bees should have all the sunlight possible; that, instead of being placed in a shaded spot on the north side of a building or fence, they should stand on the south side, where they could receive the full benefit of the winter's sun—which, of all seasons, the bees most need in winter.

Acting upon these ideas, I placed my bees in the warmest spot I could find on the south side of a high, tight-board fence, where the full blaze of the winter's sun could pour down upon them. I elevated the hives about 2 feet from the ground to avoid the dampness, and gave them all the ventilation which the Quinby hive will admit of. I discarded the enameled cloth, and, instead, covered with lath, which will not warp. On these I laid a mat of woolen cloth. In front of the fly hole, on flying days, I placed a portable box 2 feet long, 14 inches wide, and 7 inches high, covered with wire cloth, and, since then, I have never lost a colony. There is no dampness, no mold. If the bees want to fly, they fly around in the box, where they void themselves and receive the full benefit of the sun, and yet not a bee is lost upon the snow.

Kingston, N. Y., Feb. 2, 1883.

For the American Bee Journal.

Short Articles Always Preferred.

REV. A. SALISBURY.

We live in an age of revolution and progress. Revolutionary, in not using many words to express a few ideas; progressive in using few words to express many ideas. Why do short articles get the preference of readers in newspapers and magazines? It is not supposable that any one will pen an article without an idea, so all who have much to do in this busy world read short articles first, where they can glean ideas fastest, and where "counsel is not darkened by a multitude of words."

O, the horror, after having spent the time to read a long article, and the discovery is made, at the close, that it was words almost without any ideas.

True, there is an apology for those who labor under the conviction that the world is depending on them for light, so duty requires them to write many and long articles. Words are cheaper than ideas. Do not think that reflections are only to be cast upon the literary world, outside of our profession; like others, we are liable to fall into certain channels, and write and rewrite the same ideas, over and over, and occupy a long time in explaining ourselves, so as to be understood, and when understood, no one is benefited.

Camargo, Ill.

For the American Bee Journal.

Suggestions About Small Sections.

JAMES F. LATHAM.

To make a half-pound section, kerf a one-pound section on the inside of the top and bottom. Let the kerfing be wide enough to admit two pieces, each as thick as the sides of the section, and deep enough to leave 1-16 inch of whole wood on the outside. Cut two pieces, of a sufficient thickness to fill the kerfs, and in width corresponding with the sides of the section. Place the two pieces together and push them into the kerfs. A brad may be driven into the ends of each piece, if thought necessary. Put a piece of foundation in each half-section, and after the bees have filled them with comb and honey, they can be handled and crated as expeditiously as pound sections. When retailed, the two halves can be separated with ease by a light stroke, with a sharp knife, across the top and bottom of the section, betwixt the two pieces forming the division.

My first section honey was obtained in a similar box, containing two 1½-lb. sections, and I experienced no inconvenience in its use. I sold the honey for a good price, and let the grocer do the separating when required, which he did without complaint or objection.

The extra expense in construction, required by dividing the pound section, as described in the foregoing (as will be readily perceived by the experienced), is in the two extra kerfs, handling the pieces forming the divisions, and the lumber required for the division pieces. The amount of foundation is not as great as that required for a single pound section, and the two pieces can be fastened quite as quickly as one. When the whole is complete, the remaining work of the apiarist is the same as that of handling the single pound section. Racks, crates, etc., will require no alteration. Other items, *pro* or *con*, might be enumerated; but, if a half-pound section of honey is demanded by the trade, their discussion is simply a part of the business negotiation of the producer, dealer and consumer.

West Cumberland, Me., Feb. 9, 1883.

For the American Bee Journal.

My Apiary for Six Years.

H. S. HACKMAN.

Getting up a complete statistical statement of even the live bee-keepers' product, will be difficult, and I am sure of the almost impossibility of getting the statistics of "old fogies," for I have interviewed a few of such and not one could or would tell what amount of honey their bees produced. Not one in twenty, in ordinary life, keep any account of what they are doing, not even the farmers. Ask them how much they sell from the farm during a year, and they say, "I do not know; I keep no account."

Until men learn the benefit and pleasure such yearly reports afford, it will be difficult to gather statistics.

I append a tabulated statement of my work with my bees for six years, or since I commenced the business:

Total honey sold		$861 11
Supplies "		34 40
Total		$895 51
Total bees bought	$285 00	
Hive material	185 40	
Supplies	126 93	
		597 33
In favor of the bees		$298 18
2,647 lbs. of honey on hand		397 05
100 colonies, average, 25 lbs. of honey		600 00
130 " " 60 " "		1,300 00
Supplies and hives		120 00
Total in my favor for 6 years		$2,715 23

I have compared bee-keeping with several of the most profitable businesses, such as poultry, dairy, etc., but find nothing to compare with bees for profits, according to the capital invested.

When bee-keepers become enough interested to keep a correct account of their work, it will be much more easy to make out true statistical reports. I would not think of running even a pea nut stand without knowing what I was about, and how I was doing.

Peru, Ill.

For the American Bee Journal.

Hints—Standard Hives, Etc.

W. T. STEWART, 100.

I have just been commenting with a friend on the merits of the AMERICAN BEE JOURNAL, and more especially on its circulation as an advertising medium, and I have come to the conclusion that it is like Brady's Bitters, "Everybody takes it." Two years ago I wrote for its columns an article on the value of the Simpson honey plant for bee forage. Straightway I was deluged with letters of inquiry, orders for seed, etc. I commenced to answer all letters, cards, etc., until I had demolished about $2 worth of 3 cent stamps, besides paper, envelopes, and time to write, so I quit answering unless a stamp was sent me; but still they kept coming from all over this big continent. Then, last year, I told its readers something about "the coming hive," with reversible frames; ever since that, I have been almost daily receiving correspondence about that hive, and it keeps coming from Maine to California, from Canada to Texas, and even from Scotland. They want a more minute description of it, until I have a half bushel of answered letters, and as many more not answered. My stationery and stamps gave out, but when one sends a stamp I answer. I am not stingy, but poor.

Brother bee-keepers, it is our duty, when writing business letters to any party, to enclose a stamp or stamps for a reply. Some forget it, some always enclose a stamp no matter how often they write. For instance, Mr. J. H. Martin wrote me several letters concerning my hive, and in the first letter was enclosed five 3 cent stamps, and one in each after that; a man is generous who does thus. But these are hints enough, on correspondence. I will try to answer all, at once, through the BEE JOURNAL, seeing that "everybody takes it."

I cannot describe by words my reversible frame and its supports, and make it plain enough to be understood thoroughly. Last season was so poor for honey here, that I had no chance to test it thoroughly, but I am satisfied it is the best reversible frame yet invented; I have not, and will not, patent it. I have no machinery for hive-making, and no hives to sell, unless it be one as a pattern to make by, at an average price for first-class hand-made hives, and then only to accommodate.

As to the Simpson honey plant, I have sown all the seed I could save last year.

There is considerable talk about a standard frame, and a great many are advocating the Langstroth as the frame. Go over the country and measure the so-called Langstroth, and you will find that about one in ten are of the right dimensions. They are of all sizes but the true Langstroth. I am in favor of three standard frames, such as will best suit different localities; the best frame for the far North is probably not the best for Southern localities. Suppose we make the Langstroth, the Gallup, and the American frames, the standards; then all localities will be suited; so far as I am concerned, I can use any of the three, and will use whatever is adopted as the standard by the vote of all bee-keepers, and we can get the vote of all only in a way similar to the one pursued by Dr. Miller in gathering the statistics. I do not think it best (or even fair) for a few that are fine writers to decide this matter. Let us leave it to a vote, by all being requested to send their vote on a postal to some one man in a given length of time, and then have that vote, with names, recorded in the different journals as a final contract by vote of the whole, and if, Mr. Editor, you and your readers think this way advisable, and will so announce it, I will take charge of the ballot box and report promptly the parties name and vote at the expiration of the given time to close the polls. I am using the Langstroth, and also the Roop frame, which is 10 inches square, inside measure. I have about 50 of each; but I will adopt whatever is made the standard or standards, though it would necessitate a change of at least 50 of my hives. I would cheerfully make the change. My vote is to make the Langstroth, Gallup and American, the standards. By this means those who have bees to sell and ship, can so arrange their hives as to fill orders North or South without trouble, and for those who produce honey only for market, can choose any of the three sizes; section makers and supply dealers can know what to keep in stock.

Eminence, Ky., Feb. 4, 1883.

[I think it would not be wise *now* to take a vote on a standard hive. Wait till next fall or winter, after the statistical matter is tabulated.—ED.]

For the American Bee Journal.

Cold Frame, Mignonette, Etc.

W. C. JENNISON.

March 13, 1882, a cold frame was placed close to the south side of a chaff hive. The front side of the frame was 1½ feet high by 2 feet long; the back side was 2 feet high by 2 feet long, and was made just wide enough for a 2x2 feet window sash to cover it. Cleats were nailed on the sides and top end of the sash, by raising the lower end and placing a stick between it and the frame; a space was left for the bees to go outside when the weather was not too cold for them to fly.

Two days after placing the frame in front of the hive, I examined the bees, and found about 3 square inches of comb filled with sealed brood, and enough bees to cover 4 Gallup frames.

The bees would fly inside the frame when the weather was too cold for bees in other hives to venture out, but I noticed the bees bumped themselves pretty hard against the glass when flying, and think they wore themselves out sooner than they would if the cold frame had not been there. They dwindled away so there was only about one-half as many bees and less brood on the first of May than there was when I first examined them. As I lost 5 other small colonies by the cold weather and dwindling, perhaps the cold frame had nothing to do with their dying.

My experience with mignonette, the past season, was as follows: First, it will not succeed under the shade of apple trees, if you give it the best of care. Second, it must be kept free from weeds. Third, it must be sown early, so to get a good start before dry weather sets in. I sowed the seed on different dates, from May 27 to June 19; the first sown did well. I sowed it in rows, covering the seed about ¼ of an inch deep. The plants spread out about 1½ feet on either side of the row. They commenced to blossom May 27, and increased in bloom till August; and did not get through blossoming until freezing weather. The bees worked on the blossoms all day, and in all kinds of weather, when they could fly. They gather large quantities of pollen, but I do not know how much honey they get from it.

Wired frames seem to be the best for fastening comb foundation to, but the wire bothers in many ways. For example: The bees will often build queen-cells over them, and if you wish to save the cells you must cut the wire; then, again, in scraping wax and propolis from the top and bottom bars of frames, the wire hinders the operations. I have found the following a good way to remedy the difficulty: After the foundation has been all drawn out, and the honey in the comb extracted, cut the wires at the bottom of the frame, take hold the end of the wires (one at a time) and pull them backwards to the top bar, and then through it. They can be taken out quite fast; the wire cuts a slit through one side of the comb, but does not remove much wax, and the bees soon draw it together again.

I was surprised to see the following statement, which I clipped from the *American Cultivator*: "The flowers of raspberries, where this fruit is largely grown, are ruining the honey product of the neighborhood. The bees like this food, but no human being has been discovered who appreciates the product. The honey from raspberry flowers is a dirty yellow in color, with a very disagreeable flavor." The honey gathered here, when raspberry bushes are in bloom, is nice, but I do not know how large a percentage of it is raspberry. Will some bee-keeper, situated where there is an abundance of raspberries, please report upon this question.

Nantick, Mass., Feb. 5, 1883.

☞ Attention is called to our *new* and liberal advertising rates for 1883.

SELECTIONS FROM OUR LETTER BOX

Foundation with High Side Walls.

I mail you, for the Bee Journal museum, a sample of comb foundation made on my mill, that I think is the *highest side wall* ever raised by any mill. Wm. C. Pelham.

Maysville, Ky., Feb. 8, 1883.

[It certainly has the heaviest side wall we ever saw; the cells being deep enough to be utilized by the queen for receiving eggs, just as they are.—Ed.]

Changing to Other Hives.

I have 3 colonies of bees in American hives, these being the hives most used in this section. I have read a good deal about the Langstroth hive, but have never seen one. Would you advise me, as I have started with the American, to change to the Langstroth? Some bee-keepers here prefer the American hive, on account of the frames being deeper, and say the Langstroth frame is too shallow for this section for safe wintering.

A Subscriber.

Milan, N. Y., Feb. 16, 1883.

[Certainly not. Success depends much more on the management than on the kind of hives. Beginners should not change around, or have different sizes of frames. Begin right, stick to what you have commenced with, and "go-ahead."—Ed.]

Profitable Increase.

Here is my report for 1882: Apiary No. 1.—Spring, 1882, 6 colonies, fall, 1882, 14 colonies, average comb honey, spring count, 63 lbs.; apiary No. 2 (on shares), spring, 1882, 12 colonies; fall, 1882, 12 colonies; average, comb honey, 30 lbs. These figures demonstrate to me, that, at least in my locality, a judicious increase is profitable. All these colonies were substantially in the same condition on May 15, viz.: starving. I fed all alike with the above result. F. C. Gastinger.

Ada, O., Feb. 11, 1883.

Comb Honey Rack.

I sent to the museum a sample of my improved comb honey super, with 28 4¼x4¼x2 inch sections. It is made for the 10-frame Langstroth hive, but may be made to suit any sized hive or sections. It can be used with or without separators. It is a second story, made to suit the size of the section to be used. The sections are to be placed in broad frames, without tops. They are strong, very simple, and easily manipulated. They can be tiered up, one above another, or two of them may be put on the hive at once, a frame of sections removed from each, and a frame of brood put in its place, to cause the bees to commence work in sections. If 56 sections, or 48 after 8 are removed, is thought to be too many, early in the season, the bees may be excluded from a part of them by simply turning those not to be used in the lower super on their sides, or putting a piece of picture backing, or cotton sheeting, under them, and using the wedges as division boards. The hooks holding the movable sides are too small, but are all I have on hand.

A. J. Hatfield, 57-88.

New Carlisle, Ind., Feb. 17, 1883.

[The Rack is received and placed in the Museum. It is so well described by Mr. Hatfield that it is useless to add anything to it.—Ed.]

Preventing Increase.

Having now 283 colonies of bees, I do not desire any increase, and intend to run them for comb honey; that, in the past, I could not do, without the swarming fever taking place and partly frustrating my plans. In the Bee Journal, No. 40, July 26, 1882, page 474, I saw an article by Prof. A. J. Cook, on "Increase of Colonies Prevented." After reading that article I would like to put it to the test, but as my honey flow ceased about July 20, I had no opportunity to do so. I would like to ask, through the Bee Journal, any apiarist who has tried that plan to kindly report the result. If it can be successfully done to the amount of 75 per cent. I shall be delighted, and I know I am not alone in this matter. Thus far, bees are wintering well. J. B. Hall.

Woodstock, Ont., Feb. 10, 1883.

Bees Eating their Combs.

Two of my colonies of bees are eating their combs. One had about 60 lbs. of honey and plenty of pollen, and was in tolerably good condition, but it had no queen, and many bees were dead. The other colony had lots of frost in the hive, and was in very poor condition, but it had a queen, and though the bees were not dead, they could not fly in the sunshine. What is the reason for their doing so?

M. M. Sperry.

La Harpe, Ill., Feb. 13, 1883.

[While bees cut their comb for various purposes, such as making passage ways, shortening the depth of cells, etc., they do not *eat* it. They often cut and drag out excess of bee-bread.

The second colony mentioned, if not starved, is, very likely, badly diseased with dysentery, though the outward symptoms may not have been observed by you.—Ed.]

More Encouraged.

Since writing my letter, published on page 109, my bees have had a flight. I have cleaned out the dead bees from the greater part of the hives, and I find that some have commenced breeding. They have a great deal of pollen, but I think they will get through all right, if the weather is not wet and cold too long. S. Valentine.

Hagerstown, Md., Feb. 16, 1883.

Cellars Safest for Wintering Bees.

I commenced the spring of 1881 with 1 colony, received 75 lbs. of surplus comb honey, besides leaving a good supply for winter; had 1 swarm come out, but it went to the woods. I bought 5 colonies the following spring, increased to 15, and have taken over 400 lbs. of surplus. I am wintering part in cellar and part in chaff hives. I think those in the cellar are doing the best, but all are doing well. I have about 75 lbs. of wax, which I want worked up for my own use. When would be the proper time to have it worked in order to have it fresh, and when ought I to commence giving it to bees to draw out for my young swarms? T. S. JOHNSON.

Bogart, O.

[You should get it made up soon, so as to have it on hand when you want to use it, which will be in the spring. Insert a full sheet in the centre of the brood nest only as fast as the bees will use it. All that depends on the weather, and the honey flow.—ED.]

Chaff Packing Eaten up by Stock.

On Jan. 18 and 19 we had a blizzard that has made havoc among our bees. It was 20° below zero, on the 19th; on the 31st it again started at 10° below zero, and has been cold up to the present date. Most of the bees are wintered on the summer stands, packed in sawdust and chaff. One thing with our wheat chaff: the thrashing-machines do not take all the wheat out of the straw and chaff, and it becomes a harbor for mice, and they disturb the bees too much during the cold weather. One of my neighbors had his bees packed in the old style of stack hive, with corn fodder, and an old cow just feasted on the fodder until she had bared the most of his hives, and it is much the same with lucern chaff, if the calves get into the lots where it is, they will be around all night disturbing the bees and eating the lucern. JNO. DUNN.

Tooele City, Utah, Feb. 12, 1883.

The Half-Pound Section Craze.

There seems to be a great deal of enthusiasm displayed, for the past few weeks, by some, in trying to invent a half-pound section. While I admired the good judgment, used by some, in determining the proper size and dimensions most desirable for such sections, I must say that it seems to me as if they are directing their energies in the wrong way to aid in the profitable production of comb honey at a reasonable price. I admit that if but a few of these half-pound sections were used, they might be sold for a price that would pay for the extra cost and trouble, but I predict that, if any are used, many will be used, for *this is America;* and few are willing to be outdone in extravagance, but the time will soon come when we shall be unable to sell these half-pound sections of honey for enough more to pay for the extra cost, which would be no small matter in large apiaries, if we consider all the manipulations, preparing for market, etc. The retailer will want more profit, per pound, for the trouble of selling a half-pound package just as much as for a pound. This I know by experience, for in disposing of about 8,000 lbs. of honey, during the past season, I had a few cases of partly-filled sections, and as they were well finished, I sent them to a retailer who sold them out and found no fault with the honey, but said the per centage he received per pound did not pay for the trouble of handling, unless the boxes weighed 1 lb. each. Now, the question in my mind is, can bee-keepers afford to introduce anything smaller than one-pound sections? FRANK MCNAY.

Mauston, Wis., Feb. 10, 1883.

Wintering Bees.

I have 24 colonies of bees; they are in the cellar, and are all quiet, as yet; the uncapped honey was extracted, so they have had capped honey to winter on. The hives I make myself; they are 20 inches long, outside, by 15 wide; frames run crosswise of the hive. I use 2 division boards, and winter the bees on 7 frames, and give them from 10 to 15 lbs. of honey to the colony, with a passage way through each comb. In the winter of 1880-81 I lost 1 out of 9; increased to 34, and sold 15. In 1881-82 I took 500 lbs. of extracted honey from them. (I had no losses in the spring of 1882.) From the 19 colonies remaining I got 1,000 lbs. of extracted honey and 200 lbs. of comb, and sold 10 colonies. I keep a thermometer in my cellar; it stood from 4° to 8° above freezing, except 2 or 3 nights, thus far. When the mercury was down to the freezing point, they roared. JOHN BENHAM.

Homer, Mich., Feb. 16, 1883.

Never Lost a Colony in Winter.

The mercury is up to 66°, this morning, and I have just examined 2 colonies of bees, finding them in fine condition; one having brood in all stages. I can hardly miss the honey they have eaten; but since they have commenced rearing brood, the honey will go fast. I have yet to lose my first colony in wintering. J. P. MOORE.

Morgan, Ky., Feb. 16, 1883.

345 lbs. of Honey Per Colony.

I have hesitated for sometime to give, in the BEE JOURNAL, my success with bees in 1882; but reading of so many having large yields of honey, I felt that I was but a small bee man in the business, which I readily concede. I have been in the apicultural business some 16 years, using the Langstroth hive, and also a patron of the BEE JOURNAL, under the late Samuel Wagner, and always found it full of good logic. Last spring I had 5 strong colonies of bees (Italians and hybrids), to start with. The honey season was one of the best I ever experienced. From 5 colonies, I had 6 increase. One colony gave 2 swarms, and some of the others gave second swarms, but I removed all queen cells and surplus queens, and returned the swarms to the present colonies. This stopped their swarming. I caught 4 traveling swarms by decoy hives, that contained a few sheets of empty combs, making my number 15 in the fall. My honey crop was 1,725 lbs., or 345 lbs. per colony, spring count. (955 comb, and 770 extracted.) Considering my explanations below, all will certainly give me credit for not exaggerating. Two years ago this winter I lost all my bees (35 colonies); leaving many good frames of empty comb, of which I took good care. As each of the 6 swarms came out, they were supplied with these frames, as also those caught in the decoys. There were but 2 colonies of the 15 but gave surplus honey. For me to claim (as some do) that all the honey comes from the first 5, would be unfair. This proves the great advantage to be obtained by taking care of all surplus comb, as well as benefits derived from foundation. Mr. Editor, does this explanation satisfy you that mine is a correct statement? I have nothing to gain by a misstatement, and nothing to lose by straight talk. H. W. WIXOM.

Mendota, Ill., Jan. 27, 1883.

[The explanation is sufficient; and would account for a large yield.—ED.]

More Light.

In the BEE JOURNAL, page 27, January, 1883, is a report from Mr. W. H. McLendon, Lake Village, Ark., headed "200 lbs. from 1 colony." After mentioning the amount of extracted and comb honey, he says, "as well as 200 lbs. of beeswax from 70 colonies in the spring, and increased them to 130, by natural swarming." Will Mr. McLendon be kind enough to explain, through the BEE JOURNAL, how he obtained the large amount of wax? It will gratify some who have kept bees for many years. N. B. TINDALL.

Grafton, Ill., Feb. 8, 1883.

Bees in Dakota.

I started the season with 26 colonies, in fair condition, but owing to the cold rainy weather throughout May and June, I was compelled to feed my bees, to keep them from starving. I had no early swarms, my increase was obtained during the latter part of July and early in August. I only got 16 swarms, giving me 42 colonies to put into winter quarters; they were in good condition, and up to the present time are doing nicely. I took 2,200 lbs. of comb honey and 276 lbs. of extracted, making an average of 95¼ lbs. to the colony, spring count, which I consider very good for last season. I use a double-walled hive and winter on the summer stands. I will give you the result for the past 4 winters, as follows: In the fall of 1878 I had 5 colonies, and lost one during the winter. In the fall of 1879 I had 10 colonies, and lost none during the winter. In the fall of 1880 I had 22 colonies, and lost one during the winter. In the fall of 1881 I had 26 colonies; lost none. Last fall I had 42, and as above stated, have done nicely up to the present time; although the weather has been very severe since Dec. 25. The BEE JOURNAL failed to put in an appearance this week for the first time since I became a subscriber. I have become so accustomed to it that I am lonesome without it; the snow blockade must be the cause. I hope it will make its way through, for its bright pages are as welcome to me as the smiling face of a friend. W. M. VINSON.

Elk Point, Dak., Feb. 5, 1883.

Shipping Honey to England.

Please give a report of the proceedings of the Northeastern Convention, held Jan. 9 and 11, at Syracuse, in the Weekly BEE JOURNAL. I have been expecting to see it, as usual, and I have no doubt it will be interesting to all who were not there. Would you advise shipping prime extracted honey to England, next year? Can 10c. net, in bulk, be realized by shipping? Answer in BEE JOURNAL.

J. E. THOM.

Streetsville, Ont., Feb. 9, 1883.

[The proceedings of the Northeastern Convention have not yet been received from the secretary, or they might have been published.

As to shipping honey to England, we advise you to write to honey dealers in that country about the matter of realizing 10 cents per pound, net, in bulk.—ED.]

All is Well.

The floods have done incalculable damage. On the 15th and 16th instant the weather was like summer; the bees roared as they do in the spring of the year. Our bees are safe, so far. The winter has been wonderfully wet and changeable. I feared the results, but—"all is well."

G. W. DEMAREE.

Christiansburg, Ky., Feb. 17, 1883.

Bee-Keeping in Virginia.

MY REPORT FOR 1882.—I ran 12 colonies for extracted honey; they yielded 4 barrels of honey, or an average of 116 lbs. to the hive; all of it sold at 12½ cts. per pound, making $172.80. I had some 300 lbs. of comb honey in one-pound sections, which I sold at 12½ cts. per pound. I cannot sell one grade of honey here any higher than another. When a customer comes to me for honey, I sell him the kind he wants; if he wants it cut out of the sections and put into a bucket, I cut it out; if he wants it stirred up, I take a stick and stir it into a mush. The same 12 colonies that gave the 4 barrels, also gave 72 frames of honey, nearly all full and capped, which I took out late this fall. I do not know what they will weigh, but I estimate them, an average of 6 lbs., which would make 432 lbs.; this was gathered from asters in September and October. Northerners must stop saying that we cannot produce as nice honey in latitude 36° as they can in 40°. I will venture to say that Southwestern Virginia and Northwestern North Carolina produce as white honey as anywhere on the globe. The most beautiful honey I ever saw was in Wilks Co., N. C. I do not know what kind of flowers it was gathered from, but I expect it was from sourwood. I have some honey that has candied, when put on the table you cannot tell it from light-colored butter. I have produced sections almost as white as snow. The flowers we get our honey from are as follows: The first to bloom in the spring are elm and willow; then comes locusts, whortleberries and blackberries; then poplar and white clover, which is very abundant; then follow linden, goldenrod and buckwheat; asters comes in September and bloom until cold weather. The mercury hardly ever goes below zero, so our bees never winter-kill, to any extent.

JOHN FARIS.

Town House, Va., Feb. 7, 1883.

Packed in Chaff—No Losses.

My 25 colonies of bees, that I packed last fall, in the Langstroth hives, are all right. They had a nice flight yesterday, and to-day I examined all of them; they have brood in all stages, and some young bees are crawling over the combs in several of the hives. I packed my bees on the summer stands, with wheat straw on the sides and back end of hive, and chaff cushions over the frames; and I never lose any bees in this way of packing.

A. T. KELLY.

Franklin, Ind., Feb. 16, 1883.

Lovely Weather in Florida.

The weather is lovely here now, just what is wanted during the State Fair. I have been out to the Fair twice, and find the display of fruits to be very good. The part of most interest to the readers of the AMERICAN BEE JOURNAL is the display of W. S. Hart, of New Smyrna. He has some of the finest comb honey I ever saw; it, and his display of extracted honey, cannot be beaten outside of Florida. Mr. H. also has everything necessary for successful bee-keeping.

H. G. BURNETT.

Jacksonville, Fla., Feb. 15, 1883.

Statistical.

I sometimes think it would have been better if the amount of foundation used by each bee-keeper had been included in the reports; mine would read as follows: 20 colonies, fall of 1881; 20 colonies, spring of 1882; 58 colonies, fall of 1882; 300 lbs. of comb honey; 2,300 lbs. of extracted honey; 10 lbs. of beeswax; and 100 lbs. of foundation used in brood frames. AUG. J. HINTZ, 20-58.

Lamont, Ill.

Too Much Sorghum.

Yesterday, the thermometer being about 45°, I walked out among my bees, and found two colonies flying briskly, daubing the entrance, front of the hive and alighting-boards. The others (20 in number), seem to be all right now, but I fear they have too much sorghum honey in the hives, as there were several crops worked up in this immediate neighborhood, and thousands of my bees were destroyed in the boiling fluid. There has hardly been a week this winter that bees could not fly. I use the Simplicity hive, with division boards and chaff cushions, and the two that seem to have dysentery are better protected than the others, having a large box turned down over the hive. One of the queens is a perfect beauty; I obtained it from Mr. H. C. Hersperger, who, I think, has a very superior strain of bees, as regards docility and industry. I propose to test several of the better strains during the coming season, in an endeavor to find the best. N. H. ROWLAND.

Keene, Ky., Jan. 31, 1883.

Mortality Among Unprotected Bees.

My bees, wintered on the summer stands, had a flight to-day, the first time since Dec. 23. I made a thorough examination, and I find many colonies in bad condition. They were packed in sawdust. Those in the cellar are wintering well. My neighbors have bees left on the summer stands, unprotected, and I looked over several of them, and I feel safe in saying more than half of them are dead. It has been very cold; as low as 36° below zero on Jan. 22; the snow is about 18 inches deep on the level, but it is raining to-night. I fear the mortality among the bees will equal, if not exceed, that of 1880-81. I hope Mr. Sorrick will call a convention at Des Moines, as he has suggested.

H. CLARK.

Palmyra, Iowa, Feb. 13, 1883.

Scarcity of Water in California.

The rain fall this winter, so far, has been only 22½ inches. Since 1878 the rain has been insufficient, consequently the surface of the country is very dry, and, in the mountains, the springs and streams are unusually low. The general appearance of vegetation shows the effect of the drouth. Last winter we had but little rain, until February. The bee-keepers of California were hoping for a wet winter, as a good honey yield generally follows such a winter. At present the prospect for the bee-keepers is not encouraging, and, unless it rains soon, California will not have honey enough to supply the home demand.

J. E. PLEASANTS.

Carbondale, Cal., Feb. 5, 1883.

Sowing and Planting for Honey.

I see many favorable reports of the honey crop for last year; mine was as favorable as any. As to the best honey plant, there is nothing that equals the basswood. Clover is also spoken of, as being first-class; I only consider it second-class for quantity, and that is governed by the season. Care should be taken to have plenty of bee pasture. To sow, plant and cultivate is the only way to make the business profitable. It is about time for nurserymen and seed men to advertise in the BEE JOURNAL, to get the bee-keepers at work preparing for the next spring. I shall want something of the kind, and desire to know where I can do the best. Bees in this locality are all right, up to this writing; if the spring opens fairly, the coming season, will be a prosperous one. I take my opinion from the condition of the soil. The freezes and dry weather have not destroyed any of the plants, as yet. I hope soon to see some advertisements of plants and seeds for the coming season, and also to hear of interest taken in sowing and planting — that prosperity may abound among bee-keepers.

THOMAS PRALL.

Carlisle, Iowa, Feb. 3, 1883.

Bees Uneasy in the Cellar.

My bees are in frame hives; some of them are covered with gunny or old coffee sacks placed on top of the frames and a board laid on top of that; one is covered the same way with heavy paper in place of the gunny; the others have a honey board that fits the top of the hive, and a cap that comes down over the top of the hive and shuts it up tightly. They are all well filled with honey, and are strong colonies. They are in a dark, dry cellar, and those that have the caps on are very uneasy, while those with the gunny and paper on are quiet. Should I take the caps off, and give the hives ventilation at the top? Would it do to put lights in the cellar, and let them fly in the cellar? How warm does it need to be for them to fly?

W. T. GREEN.

Union Pier, Mich., Feb. 16, 1883.

[By request, Mr. Heddon replies to the above, thus: "I should have to know further of the exact condition, in every respect, of the two classes of hives you mention, in order to account for the difference in behavior of the colonies. Try alterations of two or three of the uneasy colonies, and note effects? Often colonies are very uneasy and yet persist in wintering well. By no means give them any inducement to fly in the cellar, nor out-doors until the temperature is right. Let your cellar remain dark, and at such temperature as that in which the bees keep most quiet." If Mr. Green wishes any further answer than the above, he will please send particulars to Mr. Heddon.—ED.]

Sending Bees South for Winter.

On Feb. 6, at about 4 p. m., a gentleman came into my office and said to me: "I am E. T. Flanagan, of Belleville, Ill." After reciprocated compliments, we went to the apiary and examined bees and queens, until it was too dark, when we returned to the office, and we got so interested in discussing bees, that it was nearly 9 o'clock when I thought of supper, after which we resumed the subject, and it was 2 o'clock in the morning when we thought of bed. Next morning, after showing him my steam factory, we went back to the apiary, and showed him how I reared queens, and we also examined my 4 and 5 frame nuclei, wintering on their summer stands, etc. I am wintering 35 colonies of bees for him, which are to be sent back to him by May 1, increased to double and full of bees. He has taken with him 5 of the best, to Kennerville, La., so as to Italianize 100 colonies he has just bought there, and they are to be doubled up and sent back to him in May; he has a man there to attend to the bees, so that he will get about 250 to 275 colonies of bees in his apiaries at Belleville, Ill., by the middle of May, strong and in condition to gather a crop. He says that he intends to send his bees South every fall to winter, and have them returned double in number by the first week in May, and thus not run the risk of wintering, and have them home, etc. The cost of sending me the colonies were 50 cents each; they will cost no more to return, and as far as I can calculate, they will not cost him much over $2.50 each, including the new queens for the division, etc.

P. L. VIALLON.

Bayou Goula, La., Feb. 9, 1883.

Had the Dysentery.

I put 70 colonies of bees, into winter quarters, well filled with winter stores; 50 of them I put into an outside cellar on Nov. 15, especially prepared for them, and they are doing well. Some of the 20, left on the summer stands, had the dysentery about Jan. 20; these I moved into the cellar, and it seemed to check the disease; as just as I saw symptoms of the disease I moved them in, until I have only 7 left on the summer stands. I see no more of the disease in those that I moved into the cellar. Will there be any danger of the disease spreading in the cellar?

M. H. LEWIS.

Green Top, Mo., Feb. 15, 1883.

[The cause having been removed, the effect ceases; there is no danger of the disease spreading in the cellar.—ED.]

Expects a Good Season this Year.

My 107 colonies of bees, up to the present time, are in splendid condition; they were put in the cellar Nov. 15, 1882, and will there remain until natural pollen appears. I expect a good honey season, this year; last year was a very poor one, but there was a good demand for honey at 18 cts. per lb.

F. G. KINNEY.

Bristol, Ind., Feb. 22, 1883.

What Bees Get from Corn.

Bees had a glorious flight to-day; they flew from 11 a. m. till 4 p. m.; they commenced cleaning house, brought out some half-grown young bees. Every colony is alive and strong, one crawled up my coat into the back of my neck, and elevated me a trifle. What is the use of breeding any longer for the coming bee? Why not get some of the bees Mr. Stewart speaks of, that can split a corn stalk from end to end, and just flood the whole country with honey? I have seen bees work in corn stalks late in the fall, after the corn was cut up and the sap oozed out of the stump, but that is all. They gather pollen from the tassels, early in the morning, and on moist, cloudy days. If bees can gather honey from corn stalks, there is corn enough grown in Illinois and Iowa to float the United States navy.

JAMES RONIAN.

Villisca, Iowa, Feb. 20, 1883.

Maryland—Bees All Right.

I took off the cushions from my hives and put one thickness of burlap over them. They came through all right, and had a good flight last Saturday. I put wire screens over the entrances, and to keep the bees from suffocation, by the entrances being clogged up, I tipped the hives back a little.

THOS. THURLOW.

Federalsburgh, Md., Feb. 19, 1883.

Symptoms of Disease.

Please give symptoms when the bees have dysentery. Do the feces look any different from the healthy ones? Some of my bees are very uneasy, and when they come out to the air, they eject a great deal more feces than others.

W. T. GREEN.

Union, Mich., Feb. 19, 1883.

[Yes; the feces are yellowish, and the bees soil the entrance and combs, their bodies being unusually distended. A good cleansing flight will remedy the difficulty.—ED.]

Bees Gathering Pollen.

My bees are all very strong in numbers, and are gathering pollen rapidly now, and the queens are filling empty combs with eggs.

R. J. ADAMS.

Lakeport, Ark., Feb. 16, 1883.

Cold, but Bees are Comfortable.

We have had a very cold, changeable winter. The mercury has been 29 times at and below zero. On the 16th it fell 20° in 3 hours. On the 27th of last month it was 28° below zero. Our 84 colonies are wintering nicely in the house cellar, although it seemed impossible to keep it as warm as it should be; they keep very quiet, and show no signs of dysentery, and but very few dead bees on the floor.

S. L. VAIL.

Coal Creek, Iowa, Feb. 19, 1883.

Sealed Brood on Two Frames.

Last fall I packed 37 colonies of bees. Yesterday and to-day they had a good flight. I looked through 22 hives and found sealed brood on two frames; some hatching, and all doing well. Some I packed on the summer stands; the rest were put on a broad board, 6 inches apart, the spaces filled with straw, the hives faced the south, and they were covered with boards, extending well over the fronts; corn fodder was placed along, back of the hives (the north side). I see no difference in the bees, between those packed and the ones on the board.

WM. G. GOSNEY.

Demossville, Ky., Feb. 16, 1883.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

◆

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

◆

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

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Notice.— Bee-Keepers, we call your special attention to the advertisement of Champion Bee-hive Manfactory. 2t

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Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

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☞Postage stamps, of one, two or three cent denomination, accepted for fractional parts of a dollar; but money is preferred.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., February 26, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—Extracted, dark 7c. light, 9c. here.

BEESWAX—It is quite scarce. I am paying 30c. for good yellow wax, on arrival; dark and off colors, 17@25c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—There is no excitement in the honey market, but sales are fair to our regular trade. Offerings are plentiful of extracted and comb honey. Extracted brings 7@9c. on arrival. The sales of comb honey are very slow, although there is a large supply of first-class quality on the market. It brings 12@18c. on arrival.

BEESWAX—Comes in slowly and brings 20@30c. per lb., according to quality. CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The past month has not reduced the stock of comb or extracted honey, the receipts having been larger than the amounts taken for consumption. Prices are weak and irregular, ranging from 16c. to 18c. for white comb in the smaller frames; dark, very little selling, offered at 12½c. to 14c. Extracted, 8c. to 10c., according to color.

BEESWAX—32@33c. per ℔. for good.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—For common qualities there is no demand. In a small way strictly fancy lots of either comb or extracted might be placed at an advance on quotations.

White comb, 14@17c.; dark to good, 11@13c.; extracted, choice to extra white, 8½@9½c.; dark and candied, 5@7½c.

BEESWAX—We quote 25@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Very quiet; dull. Comb at 14@16c., strained, at 6½@7½c., extracted at 7¾@8½c.—lots in small packages, more.

BEESWAX—Scarce, firm; quote choice at 28@30c., dark at 22@24c.

W. T. ANDERSON & CO., 117 N. Main Street.

CLEVELAND.

HONEY—Is very slow, just now hardly anything selling, stock on hand quite liberal. Sales slow at 19@20c. for best white 1-lb. sections; 18@19c. for 2-lb. Second grades not inquired after. Extracted very dull at 9@10c. in bbls. and 11@13c. in cans.

BEESWAX—Scarce, 28@30c.

A. C. KENDEL, 115 Ontario Street.

NEW YORK.

HONEY—Choice to fancy white clover honey continues scarce and firm, but buckwheat and extracted honey slow and irregular.

We quote: White clover, first quality, 1 ℔ boxes, 24@25c; fair to good, 22@23c.; buckwheat, 15@17c. Extracted, clover, 10@13c.; buckwheat, 9@10c.

BEESWAX—There is only a moderate supply of beeswax and prime lots held firmly.

Western pure, 30@32c; southern, pure, 31@33c.

D. W. QUINBY, 105 Park Place.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—Our supply is gone; we have none to quote.

CROCKER & BLAKE, 57 Chatham Street.

◆

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Convention Notices.

☞ The Union Bee-Keepers' Association will meet in Grange Hall, Eminence, Ky., on Thursday, April 26, 1883. All bee-keepers, and the public generally, are invited to be present.

G. W. DEMAREE, *Sec.*
Christiansburg, Ky.

◆

☞ The Texas State Bee-Keepers' Association will hold its Fifth Annual Convention at McKinney, Collin Co., on Tuesday and Wednesday, April 17th and 18th, 1883; at the residence of Hon. W. H. Andrews.

WM. R. HOWARD, *Sec.*
Kingston, Texas.

◆

☞ The next meeting of the Haldimand, Ont., Bee-Keepers' Association will be held at Nelle's Corners on Saturday, March 31, 1883, at 11 a. m.

H. CAMPBELL.

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☞ The Western Bee-Keepers' Association meets at Independence, Mo., April 28, 1883.

S. W. SALISBURY, *Sec.*

◆

☞ The Eastern Michigan Bee-Keepers' Society, will hold its annual meeting in Detroit, April 3, in Abstract Hall, commencing at 10 a. m. An interesting meeting is expected, and bee-keepers are requested to send items or questions of interest to the secretary in time, that they may be announced previous to the meeting.

A. B. WEED, *Sec.*
75 Bagg St., Detroit, Mich.

◆

☞ The Central Michigan Bee-Keepers' Association holds its spring convention at Lansing, in the State Capitol building, on Tuesday, April 17, 1883, 9 a. m. Programme: President's address (Prof. A. J. Cook), on Wintering Bees. Essays: S. C. Perry, on Chaff Hives; C. Case, on Comb Honey; O. S. Smith, on the Best Bee; A. D. Benham, on Extracted Honey; Mr. Harper, on Queen-Rearing; Mr. Waldo, on Best Method of Wintering Out of Doors, in Single-Walled Hives; E. N. Wood, on Sections; and E. Greenaway, on Comb Foundation. All bee-keepers are invited to attend or send essays, papers, implements or anything of interest to the fraternity. A full attendance is requested.

E. N. WOOD, *Sec.*
North Lansing, Mich.

◆

☞ Articles for publication must be written on a separate piece of paper from items of business.

◆

☞ We have a few copies of our pamphlet entitled "*Bee Culture*" left, and have reduced the price from 40 to 25 cents each, or $2 per dozen.

50 Colonies Italian Bees
FOR SALE CHEAP.
Address, W. J. ANDREWS,
COLUMBIA, TENN.
9Atf

OLDEST BEE PAPER IN AMERICA
THE AMERICAN BEE JOURNAL
ESTABLISHED IN 1861

VOL. XIX. CHICAGO, ILL., MARCH 7, 1883. No. 10.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

Half-Pound Packages for Honey.

In the report of the Eastern New York Convention, given in this paper (on page 131), it will be noticed that the meeting *deluded itself* with the idea that the editor of the BEE JOURNAL had conspired with Boston honey dealers, to force bee-keepers to use half-pound sections.

Our readers will, no doubt, *smile* (and perhaps *laugh* heartily) at the absurdity of that convention "making a man of straw, for the purpose of knocking him over." We, certainly, never had such a thought or desire, and do not see how any one could be *insane* enough to impute such a thing to us. The facts are these: While attending the Michigan State Convention, last December, at Kalamazoo, when the subject of "Sections for Honey" was being discussed, we made some remarks about conforming to the requirements of the trade, as to the size of sections to be used, and stated that some years ago people were satisfied with six-pound boxes, but in this progressive age they demanded *sections*, holding one or two pounds; and as a *fact* (or item of news), we stated that a Boston firm had, during the past summer, sold a lot of honey in half-pound sections—but we did not advocate their use, or request any one to adopt such a package! That this was the case is proved, beyond successful contradiction, by the report of the secretary, as published in the BEE JOURNAL, on page 792; which distinctly says:

> "T. G. Newman remarked that *he was not an advocate of half-pound sections;* but, if they were used, they should have a large surface," etc.

Again, in an editorial in the BEE JOURNAL for Jan. 10, page 18, we used this language, in reference to the half-pound section:

> The BEE JOURNAL would strongly advise *caution.* Let it be thoroughly discussed, and, then, let a few be tried and, if they will increase the consumption at good paying prices to the producer, then increase the dose, another year; but do *not* attempt to glut the market, else it may have the opposite effect.

Mr. Ripley (who is alike condemned with us) on page 35, remarks thus:

> We have noted, with anxiety, the discussion about the half-pound section, and find that the demand is credited to come from Boston, and we want to set ourselves right with producers in the matter.
>
> In the first place, we want it distinctly understood that we do *not* advise any one to use the half-pound section exclusively. Mr. F. C. Benedict expresses our views on the subject perfectly in your issue of Jan. 3. No producer can afford to use half-pound sections exclusively. One-pound sections are small enough to please 95 out of 100, and producers must respond in this proportion.

Notwithstanding all the caution, our remarks are *tortured to mean just the opposite* by that Convention, which, in its report, has published to the world "that Mr. Newman, editor of the BEE JOURNAL, should be *censured* for his officiousness, in writing and going about with Mr. Ripley, doing all he could against the interest of those to whom he looks for support."

That is *sublime!* Not only have we *not* written in favor of the adoption of half-pound sections, but we have *cautioned against* their general use! Nor did we go anywhere with Mr. Ripley, (or any other man), doing all we could either for or against any section!!

If those men had solemnly "*Resolved*" that we advocated "a return to black bees and box hives," were "making war upon all improvements in apiculture," defended the adulteration of honey with glucose, "to the injury of the producer"—and were sufficiently *insane* to believe that "the moon is made of green cheese"—they would have been as near correct as the "statement" and "resolution" were, as published in their minutes.

Of course, the BEE JOURNAL has published discussions concerning half-pound sections, giving arguments *for* and *against* them. This is in the interest of progress and improvement, and if they are not to be used, discussion, free and untrammeled, will *kill* them; but, *if they are desirable* all the resolutions of conventions and anathemas of opposers, will be as chaff in the whirlwind, for

"Truth is mighty, and will prevail."

The article on page 802, so strongly condemned by the "resolution," gave the views of Messrs. T. F. Bingham, A. I. Root, James Heddon and Dr. C. C. Miller on the best size to make a section to hold a half-pound of honey. After giving their ideas, we remarked that the small sections (meaning those holding one or two-pounds) and the small pails of pure extracted honey had killed off adulteration, by placing pure honey within reach of the masses, and that "*any step* that will aid in *popularizing the consumption of honey*, and bring it into universal demand, will be welcomed by apiarists — no matter if it be a half-pound section for comb honey, or a five-cent pail for the extracted." This was a hint that such packages were among the *possibilities*, in creating a universal demand for honey, but did not in any way advocate their adoption. We cannot see, however, how any bee-keeper can object to the sentiment expressed.

We are well aware that men of influence or position are often subjected to misrepresentation and malignity (be it in religion, politics or science), but we had hoped (*vainly*, it seems) that bee men would not indulge in such *luxuries!* We have assiduously labored to popularize the consumption of honey, and thereby benefit producers, and to be misrepresented and maligned seems to be our reward!—Be it so! We accept it *as such!*

Electric Light and Electric Alarm.—We have several times illustrated arrangements for electric alarms for the apiary. It now strikes us that the new electric apparatus can be made useful in protecting our apiaries. Concerning this new Lighter, the *New York Real Estate Chronicle* of Dec. 16, 1882, remarks as follows:

> At last we can have the electric light where it can do the most good. That is to say we can put it now on our desks, on our tables, on our mantel-pieces, anywhere in fact where a clear, bright, safe lighter is wanted. The portable electric lighter, patented in 1879 and again in 1882, is now before us, and we look at it with surprise and happiness. Surprise, because it is evident how great a progress we have made in the science of electricity; happiness, because it gives us a clearer, better, more movable light than any we have ever enjoyed. Here is a lamp, so-called, occupying only the space of five square inches, which can be carried anywhere, and is besides an ornament. By simply pressing upon the knob to the full extent of the spring (which connects with the battery) an electric current is produced by which the spiral of platinum is heated to incandesence and the light is instantaneous. The material lasts about two months and can then be renewed at a small cost through any chemist. It will not be long before everybody will have a portable electric lighter. The price ($5) is so low that it cannot fail to become popular at once. The principal office is at 22 Water Street, Boston, Mass.

☞ Correspondence waiting to be published in the Bee Journal has accumulated so much that we now have on hand all that can be accommodated for the next three months, and give our usual variety. This week several Convention reports crowd our columns so that we cannot give the usual variety. In one of the Convention reports some one intimates that we encourage Conventions in order to get matter to fill our paper—instead of this being true, we are seriously considering the necessity of omitting everything in such reports but the discussions that we may consider of value to our readers. The business portion is of but little interest to the general reader. We expect to be obliged to do this, to accommodate the growing interest in apiculture and its scientific unfoldment.

☞ Those who have written for the Swede are hereby informed that he has gone to live with Mr. H. H. Overmyer, Lindsey, O.

☞ The California *Apiculturist* has been suspended.

Flax Culture for the Seed and the Fiber, by Mr. H. Koelkenbeck, a flax grower and manufacturer of twenty-five years' experience in Russia, Germany, Belgium, Ireland and America, who is thus remarkably fitted for the preparation of such a work. American flax growers cultivate an area equal to about one-third of all the land planted to flax in all other countries, that is, about 1,127,300 acres. The value of the product is only about $7.10 per acre, because of the shameful waste of the fiber. The value of the entire crop is but $8,000,000, while the value of the fiber, from this area, if properly grown and cured, would be over $40,000,000. Mr. Koelenbeck tells us how this valuable crop may be saved, and the flax industry built up in America, by which we may save to home industry over $200,000,000 per year, now paid to other countries for flax products. The pamphlet gives full particulars on cultivation, seed and saving the crop.

☞ Some are getting impatient on not getting Alley's new book. We are promised a shipment next week. When they are received, all orders sent to this office will be filled *at once*.

CORRESPONDENCE

For the American Bee Journal.

How I Prevent After-Swarms.

JAMES HEDDON.

He who has learned the laws governing the habits of bees, from practice, as well as from theory, not only knows and owns, but *feels* the facts he has learned. The habit of swarming has been and is still deplored by many bee-keepers, not only on grounds of extra labor of hiving, etc., but as detrimental to getting the largest yield of surplus honey.

You will notice, at the same time, that it "is not fair" for Smith to put his yield from one colony *and its increase*, against Brown's report of surplus taken from one that did not give any increase.

This plea was raised in *Gleanings* when I proposed to pit Mr. Vandervort's large yield of comb honey from one colony and its three swarms against a lesser yield of honey from Mr. Carroll's one colony, that did not swarm. Every man who objected, admitted that more surplus honey could be taken with, than without increase. This, I think, is correct, and just what I tried to show, some 8 or 10 years ago, but was then considered a little too "fresh." Too much inclined to opposing the majority.

It is a fact, that the discovery of a practical, efficient method of controling increase, would be a great boon to the keeper of many apiaries. As far as I know, no such system is known. I will proceed to give you a plain, simple method that I have used successfully for the prevention of after-swarms. Let us suppose that colony No. 14 swarms June 14. With a non-erasive crayon we mark upon the hive O, June 14, and on the hive in which we put the swarm, S, June 14. Thus, we distinguish the old colony from the swarm at a glance, as we make these marks in large figures. When we hive the swarm (always on full sheets of wired foundation), we place it close on the north side (our hives front the east) of the old colony, with the entrance turned northward, away from the old colony, about 45°. As soon as the swarm is well at work, having their location well marked (say two days), we turn the hive around parallel with the old colony. Now both hives face east, sitting side by side, and close together. Sometimes, however, being governed according to the size of the swarm, as compared to the number of bees left in the parent colony, we place the newly-hived swarm on the old stand, putting the old colony through the process above described. In fact, we do this most of the time. Now, you will remember, that while each colony recognizes its individual house, they are, at the same time, as regards all other colonies in the yard, practically in one location, or on one stand.

Now, the dates on the back ends of the hives plainly indicate that second swarming will take place in about 8 days. In about 6 or 7 days (according to season or weather) after this date on the hives, we remove the old colony to a new location.

As we do this at such time a-day as most bees are in the field, this depopulates the old colony, giving the force to the new, leaving too few bees for the young misses to divide, and as they at once recognize this fact, they fight it out on the line of the "survival of the fittest." It may be proper, just here, to say a few words regarding how we manipulate the surplus departments of these two hives, as it may have something to do with the object in view. Let us suppose that, at the time of swarming, that the old colony was working in three 28 one-pound section cases. Suppose the upper one to be ¾ completed, the middle one about ½, the lower one just started. We will put two (which two, only the minor circumstances in the case can decide) on the swarm when first hived, leaving one, and, sometimes, we get another to put with it, on the old hive. Perhaps this surplus room on the old colony also has a tendency to prevent swarming.

I fancy I hear some one say, "What! all this surplus room over a swarm just hived?"

Yes, you see, but this article is not on how to produce comb honey, but the prevention of after-swarms, and while we think the success of the above method will be quite clear to those who are familiar with the instincts of the bee, it will be further understood that the proper manipulation of the details is an important part, and can only be gained by experience. The success of this plan we know by experience, and its strong points are that it can be safely, surely and practically manipulated without hunting queens, or queen-cells, or even opening a hive. It only needs to be properly executed to be thoroughly appreciated.

Dowagiac, Mich.

For the American Bee Journal.

Robbing the Inventors.

DR. E. B. SOUTHWICK.

I notice in the JOURNAL much talk about the "one-piece section," suggesting ways and means to get rid of paying the man that has introduced them, anything for his time and money spent in bringing them before the public, which is always more trouble than getting it patented. Prof. Cook also suggests that bee-men club together and have a friendly law suit, to see if the originator can hurt them if they do rob him. (I thought better of the Professor than that.)

The action of these men remind me of the boy that stole the apples. He saw a basket of nice apples in the corner of the fence. He saw no one near. He had nearly filled his pockets when a man, near by, asked what he was pocketing those apples for. The boy said he not know whose they were. The man replied, "you know whose they are not." So with all these men; they *know that they have no right;* the introducer has the right that is allowed to all nations, the right of discovery; and no man has any moral right to the thing, unless by agreement with the one that discovered it and brought it forward.

Suppose you unite and have a friendly (?) law suit, and beat; you will have the pleasure of congratulating each other on having the longest purse, being able to hire the biggest lawyers to pull the wool over the eyes of a jury. But that will be the pleasure of *tyrants*, in grinding down their subjects, because they have hired soldiers to do it.

I have no interest in, and I sincerely hope I may never become so insane as to desire to *use the one-piece section.*

Those who wish to manufacture or use the section, should take the advice of a man (who is not a Christian, but believes in doing right, because it is right): unite together and give Mr. F. a small royalty (say 25c. on a thousand more or less), for all that are manufactured in the next five years. That would give him a fair remuneration for time and money spent. How much better you would all feel if you were using a section that you knew had no dishonesty or injustice connected with it, anywhere; and that you were not liable to be drawn into a suit that would cost ten times what your sections were worth?

Mendon, Mich.

For the American Bee Journal.

Bees in a Cellar Flooded with Water.

HARRIS PEARSON.

For the benefit of those who have wet or damp cellars to winter their bees in, I will give my experience. On Nov. 15, 1880, I put 40 colonies of bees into my cellar, which is very damp, with water standing in places around the bottom. The hives were put into a room 13x8 feet, and were raised from the ground 16 inches. The cellar is ventilated by a 3-inch tile drain, running 3 rods to its mouth, and a 1½ inch pipe passing from the bee room through the top of the cellar wall and up 12 feet on the outside of the house. The cellar was damp thro' Dec. and Jan., and I feared the result.

About the middle of February we had a heavy rain storm, which caused all low places to fill up with water.

The mouth of the cellar drain is near a sluiceway, which crosses the highway, which, being frozen up, the water could not pass through; consequently it backed up, the cellar drain filling the cellar to a depth of 16 inches, reaching to the bottoms of the lower tier of hives.

After about 30 hours the sluiceway thawed out, and the water disappeared, leaving the cellar as wet as it could possibly be. The hives remained standing as when put in, until April 15, 1881, when I carried them out, and found all colonies in good condition but two, and they had been destroyed by the mice.

I have now 65 colonies in my cellar; they have been in since Nov. 15; they are all quiet, and wintering finely.

Gouverneur, N. Y., Feb. 26, 1883.

For the American Bee Journal.

Sweet Clover not a Noxious Weed.

L. H. SCUDDER, 63-143.

At the Northwestern Convention at Chicago, last fall, it was stated that the laws of Illinois made it a penal offense to introduce or plant melilot or sweet clover, and after some discussion in regard to the matter, Mr. M. M. Baldridge and myself were appointed a committee to investigate, and if we found any such laws in existence to try and secure the repeal of the same during the present session of our legislature.

I do not understand that any formal report was required of us, certainly not until the next meeting of the Society, therefore I will report what action I have taken in the matter, and will ask Mr. Baldridge to give us, through the BEE JOURNAL, the results of his investigation.

I have examined the statutes of Illinois carefully and cannot find the name mentioned. There are only two plants named, viz.: Canada thistles and castor beans, which, by the laws of Illinois, are declared "noxious weeds." It is true that the law seems to imply that there are other noxious weeds and fixes the same penalty for introducing as those above named It is evident that the burden of proof would rest on the complainant, and if he failed to establish the fact of the noxious character of the plant, the case would fail. Therefore, I conclude that if sweet clover is as valuable as we believe it to be, we should have no hesitancy in giving it a fair trial. I have not been able to find any conclusive evidence to convince any one that the introduction of sweet clover could be objected to by any reasonably disposed person.

The Farmers' Practical Encyclopedia speaks of it as a good honey plant, but "spreading as a persistent weed." If that is the worst that can be said of it, let us raise as much of it as we see fit, trusting that the good will overbalance the evil, enough to make all feel friendly towards it.

New Boston, Ill.

For the American Bee Journal.

Comb Honey Rack.

JOHN T. SMITH.

I send to the BEE JOURNAL a sample of my improved honey rack for holding the 4¼x4¼ sections. I send two racks; they cover one hive; one full of sections in place, and one, empty. 1. I can use one rack at a time on light colonies or box hives; 2. I can tier up, one upon another, on strong colonies, without adding more than one at a time; 3. By having each tier ¼ inch apart I can get the honey off as fast as it is finished, as I can work in between the other tiers; 4. By taking off honey as fast as finished the combs are nice and white, the bees keep at work all the summer, and do not get the rack completed, but have partly finished ones to keep them encouraged; 5. The shape of the rack is such that the bees cannot glue the sections fast or soil the same; 6. By being ½ inch inset for sections to set in the rack, separators can be used resting on the top edge of the rack, leaving ⅜ inch space below the separators, for bees to pass through; 7. By using the rubber cord to hold the sections in place it holds all tight in dry weather or damp, and the cord is not in the way when tiering up; 8. I can take the sections out of the rack and turn one of the racks upside down on the top of the hive, for winter use, that forms the best of winter passage over the top of the frames. I like it as well as "Hill's Device" for that purpose; 9. In taking out and replacing sections, the bearing is so small that I do not kill as many bees as with other racks, where the bearing comes on the entire bottom of the section. In tiering up I do not raise the rack, but raise one tier, 6 sections, at a time; putting the empty ones at the bottom, and partly filled ones on top.

I have 83 colonies of bees in winter quarters; part of them are packed in chaff, on the summer stands, and part are in the cellar. I used the rack on them last summer with the best of satisfaction, as have all the bee-keepers in this vicinity.

Bellevue, Mich.

[The rack is placed in the Museum for the inspection of visitors.—ED.]

CONVENTION
NOTES

For the American Bee Journal.

Northeastern Michigan Convention.

In pursuance to a call, the bee-keepers of Northeastern Michigan met at Flint, Tuesday, Feb. 13, and organized what will henceforth be known as "The Northeastern Michigan Bee-Keepers' Association." A constitution and by-laws was adopted, and the following officers elected: President, R. L. Taylor, Lapeer; Vice-President, Dr. L. C. Whiting, East Saginaw; Secretary, W. Z. Hutchinson, Rogersville; Treasurer, Byron Walker, Capac. The next annual meeting is to be held on the first Wednesday in March, 1884, in Lapeer.

After the election of officers, the appointing of a committee on exhibits, and the decision as to the place of next meeting had been arrived at, and the president and secretary had been instructed to call a special meeting just before the meeting of the State Association next December, the convention adjourned until 1:30 p. m.

At 1:30 the meeting was called to order by President Taylor. The first subject for discussion was that old, but ever interesting one, of

Wintering Bees.

Dr. L. C. Whiting: I would have a good colony; a good queen, good brood, and an even temperature.

Dr. Rulison: I would feed plenty of granulated sugar, and winter in the cellar. Would have the cellar well ventilated and dry; the temperature between 32° and 35°, and keep no vegetables in it.

Prof. Cook: Why would you have the cellar dry?

Dr. Rulison: Because the water at one time leaked into my cellar. Where the water came in, a colony died, and the combs were very moldy; at the dry end of the cellar the bees wintered best.

Prof. Cook: I have wintered bees five years successfully in a cellar, in which the water stood one foot deep, what do you think of that?

W. Z. Hutchinson: Within the last few days I have had the pleasure of visiting Mr. J. H. Robertson of Pewamo. He has 350 colonies in an out-of-doors cellar. There is a spring in the cellar, but, when I was there, the water had not yet commenced to flow, and Mr. R. was shoveling snow into the cellar by the bushels. The snow gradually melted, and the atmosphere was so damp that it could be almost felt. The bees were in splendid condition. I have no hesitation in saying that they were the finest lot of bees that I have seen this winter.

Clark Simpson: Poor honey often causes dysentery. Bee-keepers often make a mistake in extracting their early-stored, well-ripened honey, and letting the bees fill their combs with fall honey, which is often of poor quality. I think the walls of chaff hives are usually made too thick.

Byron Walker: I would like the experience of Mr. Simpson that induced him to think that chaff hives should have thinner walls.

Clark Simpson: When the walls are thinner, the bees receive the benefit of the sun's warmth.

Dr. L. C. Whiting: One winter I had hives facing in different directions. The only ones that survived the winter were those with their entrances facing towards the south. Probably the sun kept the entrances thawed open.

Dr. Rulison: I have known bees to winter well, buried deeply in snow.

J. L. Wilcox: I have kept bees 25 years; I fasten them in the hives during the winter, and have never lost many colonies.

Byron Walker: I think the protection that bees have, may have something to do with whether they can be fastened in without harm. When bees were heavily covered with chaff, and they became uneasy, I have removed the chaff, and the bees soon quieted down. The kind of winter stores that the bees have, has much to do with how they winter.

T. C. Pollock: I do not advise shutting bees into their hives. I leave a space above the bees in the cap. My bees winter best in the dampest part of my cellar. I would not advise bee-keepers to take away the best honey and compel the bees to winter on late gathered honey, that may be of poor quality.

L. E. Welch: I consider it of the greatest importance that the bees should be kept in an even temperature.

Prof. Cook: I agree with Mr. Welch, but there are many other things besides temperature that must receive attention. I once poured water over every opening in the hive. This was during freezing weather, and the bees were completely frozen in, or sealed up with the ice. Snow was then shoveled over the hives. The bees came through all right, but I would not advise such methods.

L. E. Welch: Although I consider an even temperature of great importance, yet I will admit that good food is also important.

Prof. Cook: I have visited the bee cellars of D. A. Jones, of Beeton, Canada. The walls are 3 or 4 feet thick, being filled with sawdust. Each cellar is supplied with air through 8-inch tile that are laid beneath the frost line, and reach the open air at a distance of 200 feet from the cellar. The cellars are ventilated at the top. There is also an ice-box over each cellar; by putting ice into these the temperature can be controlled during the warm spring days. I would not carry bees out during the winter, unless they become uneasy, and were soiling their hives.

R. L. Taylor: Bees sometimes become uneasy, and then quiet down again without being carried out of the cellar.

L. E. Welch: Perhaps they move about, cluster in a new place, and begin to feed upon a better quality of honey, and hence they quiet down.

Byron Walker: I have tried sub-earth ventilation, but it failed unless the bees were furnished with proper food. I do not think the late gathered honey is always of the best quality.

Prof. Cook: Late gathered honey may not always be natural honey; it may be the product of plant lice.

W. Z. Hutchinson: I have 11 colonies out of doors. Some of them are now dead from dysentery, and I think they will all die except one, which is in good condition. This fortunate colony had all of its honey extracted last fall, and was fed granulated sugar.

Clark Simpson: I would not put more than 50 colonies in one cellar. I would have the cellar frost proof, and well ventilated. Would be sure that the bees had good food, and that the hives were so arranged that they would not be jarred.

Dr. L. C. Whiting: If my bees needed feeding, I would feed them honey that I have put away for that purpose.

Prof. Cook: Yes, doctor, but if we had no honey laid away, then what should we feed?

Geo. W. Hand: I would feed the best white sugar. I have taken bees that my neighbor was going to brimstone, fed them upon white sugar, and carried them through all right.

Dr. Whiting: I can shake the bees off the combs in the fall, extract and sell the honey, go visiting during the winter, buy bees in the spring, and make more money than you can by wintering your bees.

W. Z. Hutchinson: And I can scrape up the bees that you shake off, feed them sugar, sell them back to you in the spring, and have more money left than you will.

Clark Simpson: I knew of a man who wintered a colony of bees without combs, by feeding them sugar, and occasionally rye flour. The bees filled their hives with combs during the winter.

Can the production of honey be overdone?

Dr. Rulison: I sell my honey in my home market—have educated the people to eat it. If the people are only educated to eat honey, they will eat all that we can produce.

M. D. York: I will sell my honey in my home market. Many people eat honey now who never thought of eating it until it was produced in their neighborhood, and their attention was called to the matter.

Dr. Rulison: As long as there are so many losses during the winter, there will be but little danger of the business being overdone.

Dr. Whiting: Now that the markets of the Old World are opened up to us, we can sell all of the honey that we can produce, and that, too, at good prices, if we send the Europeans nothing but good, pure honey.

Prof. Cook: C. F. Muth, of Cincinnati, who has had a very large experience in handling honey, says that we need have no fears of over production if we will only stop adulteration, so that the people will have confidence enough to buy the honey.

M. D. York: We have not labored entirely in vain; the people are becoming educated; just let me give an illustration: Last fall, to fill out an order, I was obliged to fill two jars with extracted honey that had just been melted up. A week or two afterwards, as I was in the store where the honey was on sale, the proprietor called me to one side and said: "You might just as well carry home those two jars of liquid honey; no one will buy them; people are beginning to find out that pure honey will granulate upon the approach of cool weather." I explained the circumstances to him, and the condemned honey was sold before I left the store.

The essentials of a good location.

Byron Walker: I would prefer a location in which the bees can find honey to gather as soon as it is warm enough for them to fly. Raspberries are excellent honey producers. Fall flowers are more certain to yield honey than those that blossom earlier. I would not advise any one to run away from white clover and basswood, but to take in the swamps and fall flowers, if possible.

L. C. Whiting: I would like a location that has willows, soft maples, barb maples, white clover, basswood; in fact, I want a succession of bloom.

M. D. York: I have sowed alsike to help furnish a succession of bloom, but the honey is of poor quality compared to white clover or basswood.

Prof. Cook: It seems to me, Mr. York, that you must be mistaken; are you certain that it was alsike clover honey that you found of poor quality?

M. D. York: Yes, I am certain. The bees were working upon nothing else; and I extracted it before they commenced to work on anything else.

W. Z. Hutchinson: I, one year, had 300 pounds of alsike clover honey, and nothing could be finer. It has a pinkish color, while the flavor, although distinct, is very pleasant.

Prof. Cook: Instead of moving to a location near swamps, would it not be better to cultivate honey producing plants? Some have reported obtaining excellent results by cutting alsike clover just before it blossoms, thus bringing it into bloom after the close of the basswood honey harvest.

D. Shangle: I have sowed alsike clover with wheat. It made such a growth that, when the wheat was cut, the clover also was cut. The clover grew up again, blossomed and produced honey.

W. Z. Hutchinson: Mr. J. H. Robertson advises pasturing alsike until the last of June. By this method he says that two crops can be obtained; one crop of honey and one of seed.

Comb Foundation.

Prof. Cook: I have used foundation ever since it was first sent out by "John Long," or whoever he was, and I am becoming more and more convinced, each year, that it is one of the greatest inventions that has ever been given to bee-keepers; I do not think, however, that drone foundation is going to be used.

R. L. Taylor: I consider foundation invaluable. One of its greatest advantages is that it enables us to control the production of drones. I have used the flat-bottomed foundation in boxes, and with this I have found a "fish bone" in the honey. By filling the boxes with foundation, the bees build their comb straighter and quicker. I have given the bees a frame of foundation, late in the afternoon, and the next day found it drawn out and filled with eggs. I have used all kinds of foundation, and, unless it is wired it will sag. In light colonies, or cool weather, it may work very well, but in full colonies, or hot weather, it will sag, warp or break down. If it sags, the top cells are drawn out so large that drones will be reared in them. With the Given press the foundation is made directly into wired frames, thus saving all trouble of fastening in the foundation.

J. H. Wellington: I have nothing to say against wired foundation or wired frames, but I do wish to say a word in favor of the flat-bottomed foundation. I have used it very thin, and found no "fish bone" in the honey. Perhaps Mr. Taylor may have used thicker flat-bottomed foundation than I did.

L. C. Whiting: I wish to put in a word in favor of the flat-bottomed foundation. I have used the Given foundation, but the bees gnawed it out before the honey flow came. It may be because the Given was softer than the flat-bottomed.

W. Z. Hutchinson: May not the quality of the wax have something to do with this?

R. L. Taylor: So large a surface of the flat bottomed foundation receives pressure that it makes the foundation too hard, and instead of drawing out the wax the bees build on it.

J. H. Wellington: I have always noticed that the base of the cells were worked into a natural shape.

Dr. Rulison: I have used a great deal of foundation, and prefer that which is wired.

M. D. York: I use the regular Langstroth frame, and have kept the foundation from sagging by using what are called Cheshire rakes, but it is a very troublesome method.

D. Shangle: I use no wires, and have no trouble from sagging. My hives are 1 inch larger, each way, than the regular Langstroth.

Dr. Rulison: I live near Mr. Shangle, and I would say that he makes his foundation very heavy.

D. Shangle: I dip the boards three times. If the wax is very hot I sometimes dip once or twice more.

H. A. Fenner had used foundation 6 or 7 feet to the lb., and it did not sag.

L. C. Whiting: I have used foundation in which there was some paraffine, and it always stretched badly.

Prof. Cook: I have used the flat-bottomed foundation, and I must say that the bees did not work it out very readily.

Byron Walker: I would not have foundation, for any purpose, made heavier than 6 or 7 feet to the pound.

Prof. Cook: I have seen them making foundation at Mr. Jones', and they reverse the dipping board each time they dip it, thus making the sheets of uniform thickness.

R. L. Taylor: There is a great difference in wire; some is "springy" and will tangle up, other kinds give no trouble; get that, that does not "tangle." I wind the wire around a board, and the board is of such a length that when the wire is cut where it passes around one end of the board, the pieces of wire are just the right length for wiring a frame.

Mr. Taylor then had his Given press brought into the room. A dish of water was brought to him. He put one or two pieces of concentrated lye, as large as a kernel of corn, upon the dies, wet an old shoe brush in the water, and with it washed the lye all over the dies. Some wired frames were piled beside the press, the small bundle of sheets of wax that had been lying behind the stove were handed to Mr. Taylor, when presto, the wired frames filled with the beautiful foundation were soon being passed about the room amid the clapping of hands and exclamations of delight. A hearty vote of thanks was extended to Mr. Taylor for bringing the press and showing the manner in which it worked.

Mr. Shangle had an Olm foundation machine on exhibition, and wished to show how it worked, but had not the proper lubricator there.

Overstocking.

Prof. Cook: I think it well-nigh impossible to overstock a locality. If there is plenty of honey it is difficult to have bees enough to gather all of it; if no honey is secreted, it makes little difference whether there are few bees or many.

Clark Simpson: The secretion of honey is so rapid that I consider it impossible to overstock a locality.

Byron Walker: I have noticed that, wherever a few colonies of bees are kept just out of my range, they always give better results than I get from my large apiary.

J. H. Wellington: There was, at one time, 600 colonies kept in the city of Saginaw, and my partner (Mr. O. J. Hetherington) and myself were obliged to move most of our bees out into the country in order to get any surplus. We kept just enough bees at home to show that we were in the business.

Different varieties of bees.

Prof. Cook: I consider the Italians better than the blacks, and the Syrians better than the Italians. The Syrians are more prolific, and are excellent honey gatherers.

Clark Simpson: The Syrians are worse to swarm; but, for all of that, I like them.

Prof. Cook: It has been reported that they do not seal their honey properly. Did you notice anything of that kind?

Clark Simpson: Nothing of the kind, they make as nice comb honey as any bees.

M. D. York: I had a colony of Syrians, last season, that outstripped an Italian colony that was its equal in all respects that could be discerned.

D. Shangle: I have tried blacks, Italians and Syrians, and the blacks made the most comb honey, excepting some hybrids that I have had.

Dr. Rulison: I would not take a swarm of blacks, and keep them black, if you would give them to me. Nothing suits me better than pure Italians. I do not want the Syrians, because they swarm so much, and because they are so cross. I do not like the black bees, because the moths trouble them so much, and because they are not of an even "temperament." Neither do I want imported stock; good, pure, home-bred Italians are good enough for me.

Byron Walker: I like the black bees because they do not swarm so much, and because they are the ones that pile up the comb honey ahead of anything else.

M. D. York: I have tried the blacks and Italians, side by side, for three years, and have discarded the blacks. I think that many discard the Italians because they do not understand them. The Italians and Syrians swarm more, simply because they are more prolific. I practice putting a swarm into a hive from which a swarm has issued a day or more previous; there is then spent that energy that a new swarm always has, in making comb honey in the boxes.

J. H. Wellington: Our hybrids beat everything in making comb.

The committee on exhibits reported as follows:

Mr. President, your committee on exhibits reports a very large exhibit. Our president, R. L. Taylor, of Lapeer, exhibits a Given press, wired frames, a Chapman press for piercing frames for wires, and comb foundation. Mr. Taylor, like all owners of the Given press, is very enthusiastic in its praise. He also showed how the press worked.

M. S. West, of Flint, shows crates, comb honey, extractor, hives with Langstroth frame, also one with Gallup frame, half-pound sections, and a plan of a bee house presented by his daughter.

J. H. Wellington, of Saginaw, presents hives with reversable frames, a Bingham smoker, and a Bingham and Hetherington honey knife. He values the reversible frame very highly. Reversing causes the bees to fasten the combs to the bottom bars, and sets the bees to carrying the honey, that is stored near the top bars, into the sections.

Mr. Clark Simpson, of Flushing, exhibits side-opening hive with arrangement for side-storing and chaff packing; a home-made, cold-blast smoker, combination seat and tool box, and a lamp nursery for hatching queens. In this combs are not put, but the queen-cells are cut out and placed in separate apartments. With no honey accessible, Mr. Simpson says that the young queens will not kill each other.

Rulison & Simpson, Flushing, exhibit fine samples of extracted honey.

D. Shangle, Hazleton, shows the Olm foundation machine. He lubricates the rolls with thin flour starch.

L. E. Welch, Linden, shows a Simplicity hive with Gallup frame, crate filled with half-pound sections, and wood separators.

Byron Walker, Capac, presents one-piece sections, and combined storing and shipping crate. His sections have no recesses, but have, instead, projections on the ends. His section are 1¾ wide, and he uses no separator. His crate can be used at the side, top, or even in the middle of the brood nest.

August Koppen, Flint, exhibits a chaff hive with bottom board filled with chaff, and a large extractor with automatic arrangement for turning the combs.

W. Z. Hutchinson exhibits several neat pails of granulated honey, together with a stand for holding them while they are on sale in a store, a Bingham smoker, and a cold-blast smoker from Mr. Kemp, samples of all the bee papers, some bee books, and a photograph medley showing about 150 bee-keepers.

Dr. L. C. Whiting, East Saginaw, shows a Scoville smoker, a section crate, and brood section frame with only three sides, one side of which is sheet iron, which enables the operators to easily remove the sections.

A. J. Cook, L. C. Whiting, W. Z. Hutchinson, *Committee on Exhibits.*

Twenty-nine members were enrolled; the best of feelings prevailed, and, if the future meetings are as good as the one that has just passed, the Association will be a decided success. W. Z. HUTCHINSON, *Sec.*

Eastern New York Convention.

The annual meeting of the Eastern New York Bee-Keepers' Association was called to order by President Tennant, at Albany, Jan. 2, at 2:30 p. m. The secretary being absent, T. Houck was appointed secretary *pro tem.* The minutes of the last meeting were read and approved. The president made a very appropriate and interesting address. Adjourned to 10 a. m.

President Tennant called the meeting to order at 10 a. m., and Secretary Quackenbush's report was read and accepted, and his bill was ordered paid. The treasurer's report was read and accepted; showing $15.58 in the treasury.

An essay by G. W. House was read, the main points of which were as follows: "The Western bee-keepers labor for their united interests, by protection to their journals; by the advocacy of their fancied superiority of some work published, or the use of some implement manufactured in the West, and by a unity of action to keep us in the East disunited. Under the existing circumstances, I will venture to say that beyond the meeting and hand-shaking of friends, and the making of new acquaintances, conventions, as generally managed, are not beneficial to the specialist. I am now fully satisfied that publishing our minutes works positive injury to the Assocation and its members. It damages the society by driving therefrom our most eminent apiarists, who do not care to give to the world their discoveries and inventions, and then be abused and dictated to by novices. They would rather reserve what they know of value, and learn what they can from the publication of our proceedings. The members of the society are injured because many penurious bee-keepers will remain at home, instead of giving you their attendance, and assist in sustaining the Association, knowing that they can read the proceedings at their leisure."

This essay called out considerable discussion. Mr. Vrooman favored publishing the proceedings; also that County Conventions send delegates to State Conventions; that many bee-keepers would not go so great a distance to attend a State Convention; that the delegate should be regularly elected at the County Convention, and delegate pay their own expenses.

Mr. Tennant thought the delegate should be instructed to the interest of the Association. He opposed all rings and monopolies. There are things on foot that are working injury to our interests. There are many bee-keepers who will not come, on account of their being henpecked and forced to tell all they know, to be published.

Mr. Wormer: The more knowledge one gets of bee-keeping, the more he wants to go into the business. He thinks there is sufficient demand for all the honey we can procure, and that if we cannot publish anything, we certainly cannot learn anything.

Mr. Markell believes in making true reports and giving it to the public.

Mr. Garret said bee-keepers are like boys that hate to be outdone by others—and make their estimates too high, so as to be up with their neighbors.

Mr. Robdell thinks a great deal of our knowledge should not be published; high estimates are an injury.

Mr. Wright: The proper way to make our reports is by number, as Western men do.

Mr. Denton thought we ought to advance new ideas to each other; he is in favor of having conventions; what is practical with one, is not with another; an experimental knowledge is the best.

Mr. Haverly: Best posted bee-keepers should tell what they know, for the benefit of inexperienced ones.

Mr. Tennant: We ought to have a system to protect ourselves; bee-keeping is increasing to such an extent that we should be protected by organizations, County and State; we must have protection by legislation, if necessary. There are no kinds of business but have an organization, to set prices. Many bee-keepers are too penurious to attend the conventions—thinking they can get it all out of the bee journals. If they cannot come and take part in the convention, they are not worthy to be called "Brother Apiarist."

Secretary Houck said he had gained his knowledge of bee-keeping by first reading "Quinby's Bee-Keeping," and taking the various bee journals, with his own experience, and he believed that they all had gained most of their knowledge in the same way, and is it for us to say that it must stop there? Suppose Langstroth and Quinby had been so selfish and not made their experiments and practical experience public, where would apiculture stand to-day? That the bee journals have done more to work up the demand of our products than anything else. Because we have gained that knowledge, shall nobody else have the chance? He offered the following: *Resolved*, That we publish the proceedings of this convention in full. Carried.

After a lively discussion Mr. Garret offered a motion to rescind the resolution, which was carried, and the question was laid on the table until to-morrow.

The convention was called to order at 1 p. m. President Tennant being absent Vice-President Vrooman took the chair. The election of officers resulted thus: President, Sol. Vrooman; Vice-President, A. Snyder; Secretary, T. Houck; Treasurer, H. W. Garret.

The secretary read an article by A. J. King, of New York.

[For this essay see page 22.—Ed.]

After a lively discussion the convention adjourned until 7 p. m.

Meeting called to order at 7 p. m., President Vrooman presiding. The following questions for discussion were reported by the committee:

1. "What is the Best Method of Starting Nuclei for Queen-Rearing?"
2. "How Long will a Queen Remain Profitably Prolific?"
3. "What Improvements can we Make in Marketing our Products?"
4. "Shall our National Convention be Held Outside of the United States?"

The first and second questions were discussed in their respective order.

Mr. Adams makes about four nuclei out of one of his strongest colonies. His hives hold eight frames, thus taking two frames of hatching brood for each nuclei.

Mr. Tennant: It depends on the season. Considers young bees the best for queen-rearing. He breeds only from his strongest colonies—those that winter and make box-honey best. Considers two frames of hatching brood the best for nuclei.

Mr. Boomhower: Took about 18 colonies and made one nuclei from each. He took the box he used to the hive, found the queen and took a frame of brood—one that has the brood near the centre of the frame—put it in his box, first brushing the bees off of two frames into the box, and in 4 or 5 days he would do the same thing, and so on until he had made about 90, and he has had an original colony swarm the same year.

Mr. Adams: My experience with a lamp nursery was very unsatisfactory.

Mr. Tennant thought it depended somewhat on how the queen was reared. Preferred one reared under the swarming impulse, and in the forepart of the season. He thought about three years was the extent the queen was profitably prolific, but sometimes longer.

Secretary Houck: You could force a queen to lay in two years what would under other circumstances take four. Adjourned to 9 a. m.

Convention called to order at 10 a. m. President Vrooman in the chair.

This session was opened by a lively discussion on an editorial article in the Bee Journal of Dec. 20, 1882, page 802, on "Half-Pound and Penny Packages, or Packages of the Future." The members thought that it was very important that the convention complete the idea of protection, discussed yesterday. They wanted to see the convention placed upon such a foundation that it would have an influence at home and abroad. That Mr. Newman, editor of the Bee Journal, should be censured for his officiousness in writing, and going about with Mr. Ripley, doing all he could against the interests of those to whom he looks for support. If Mr. Newman cannot stand by the producers they should withdraw their patronage. That the producers must pay him for everything he does in the way of printing, etc., and at the same time he was pushing himself against their interests. And also, as a convention, they should ask that Mr. Newman retract and reconsider the article in question.

Motion made by Mr. Tennant, and carried unanimously, that the convention resolve itself into a committee of the whole and adopt the following:

Resolved, That we ask Mr. Newman, editor of the Bee Journal, to reconsider the article as printed in the Weekly Bee Journal of Dec. 20, 1882, on page 802, on "Half-Pound Sections, or Penny Packages, or Packages of the Future," together with what he himself has said in the article, and the influence that he has set forth in confirmation with that of Mr. Ripley, agent of the firm known as Crocker & Blake, of Boston, and see if the items referred to inure to the best interests of the producer; also we ask Mr. Newman if he does not consider it officious to publish or recommend it to the public, to the injury of the producer.

[For reply to the above, see first page of this paper.—Ed.]

A lively discussion followed in regard to the proper size of box.

Mr. Tennant favored the 2-lb. boxes. That we should not deviate from 1 to 2 inches thick, as it makes the neatest-looking card of honey; it also was the most natural for the bees to work.

Mr. Vrooman prefers one 5¼x5¼x1⅞ thick.

Mr. Van Deusen thinks it is a benefit for both the supply dealer and producer to have one standard box, then the supply dealer could in the winter time make up a large stock and be ready to furnish his customers without that delay which sometimes causes so much trouble.

Mr. Garret was of the opinion that the 2-inch was the most used of any, and that the bees would fill a 2 inch box quicker than one that is only 1¾ thick.

Secretary Houck said the majority they manufactured were 1 15-16 thick, called the prize box; and thought it was about the right size, and could be made easier, for the reason that 2-inch plank, as a general thing, would plane only 1 15-16; if they had to be 2 inch they would have to block up the lumber.

Mr. Boomhower said that those manufactured by Mr. Manum were 2-inch excepting the 4¼x4¼ dove-tailed, and those were 1⅞ thick; he preferred the 1⅞ box.

Secretary Houck offered the following, which was adopted: *Resolved*, That we adopt as a standard the 2-lb., and nothing smaller than the 5x5¼x2 inch section.

Motion was made and adopted that we add the following to "article two" of the constitution: "However we invite exhibition of products and supplies, and time will be given between sessions and at proper times appointed for examination."

Another motion was made and adopted that the secretary invite exhibition of all apiarian supplies at the time of his giving notice of meetings.

Where shall we hold our next annual convention came under discussion. Finally, it was voted to be held at Albany, in Agricultural Hall. Not knowing when we could have the hall, it was left to the president and secretary; but they were to get it as early in January as possible.

Adjourned until 1 p. m.

Convention was called to order by President Vrooman at 1 p. m.

The president, upon motion, appointed the following members as a committee on questions for discussion at our next annual convention. Questions to be reported to the secretary on or before Dec. 1, 1883: W. L. Tennant, Schoharie, N. Y.; A. Snyder, Clarksville, N. Y.; G. H. Adams, North Nassau, N. Y.

Motion made and adopted, that we have a programme, that it contain three essays, that it also contain the motions solicited by the question committee; and that all be reported to the secretary, by the respective committees, by Dec. 1, 1883, and that the secretary have the same printed and circulated to each member of the Association, and to such other members of sister associations as the president and secretary shall direct.

Secretary Houck then read a paper written by James Heddon, on dysentery, or bee cholera and spring dwindling. Of the latter he said: "I believe that no colony that was healthy when the days of long periods of confinement ceased (which we call winter) and the days of oft-repeated flights arrived (which we call spring), ever "spring dwindled." Spring dwindling is loss of bees in daily flights, from weakness engendered by a disease of the intestines, called dysentery, which had not, at the time of flight, progressed far enough to make any outside show, but was all held within the body of the bees, hence was unobserved by the apiarist. It is dysentery in disguise."

Mr. Tennant thinks a cleansing flight will sometimes cure dysentery, if they have not been confined too long; old bees are more liable to have the dysentery than young bees—making it quite necessary to go into winter quarters with a good supply of young bees; he does not believe that pollen alone is the cause of dysentery, but eating it in connection with honey, and continual cold weather without purifying flights.

Mr. Vrooman had lost over 100 colonies in one spring, with dysentery;

but did not believe pollen alone was the cause.

Resolutions of thanks to the three writers of essays, and the late president and secretary, were passed.

Shall the National Convention be held outside of the United States, was discussed. Many members held it was a North American convention, instead of National, and, therefore, could properly be held in Canada.

There was considerable interest shown in the discussion of what improvement can we make in marketing our products.

Mr. Vrooman thinks we ought to hold on longer, and not be in so big a hurry to dispose of our crop; that October is about the right time to ship honey; he would not send it off on commission, but sell it right out, and get the money in his pocket.

The members were of the general opinion that the best way was to let buyers come and offer, instead of running after them; also that we were apt to be in too much of a hurry to sell our honey.

Exhibiting honey and apiarian implements at the State Fair, was discussed, and the following resolution was carried: That the president and secretary confer with the managers of the State Fair, for a suitable place and room for the exhibition of honey and implements for the apiarists of the State, and also offer premiums for the same.

Secretary reported $12.50 fees received, of old and new members.

The question in regard to the publication of the proceedings came up again. After considerable discussion it was decided to leave it to the discretion of the secretary, what part to publish and what not.

At the last moment there was a resolution adopted that we glass all our boxes, both large and small, before sending to market.

Convention adjourned to meet again in one year. THEO. HOUCK, *Sec.*

Maine State Convention.

The fourth annual meeting of the Maine Bee-Keepers' Association was held at Dexter, Feb. 8, 9, 1883.

President Addition gave his annual address at the commencement of the afternoon session. He succinctly stated the objects of the Association and the progress it had made. He briefly reviewed the progress bee-keeping had made during the last few years in other parts of the country, and the spirit of enthusiasm having been felt here in the Eastern States, bee-keepers were waking up and taking hold of the business in earnest.

The report of Secretary Hoyt was in substance as follows: The Maine Bee-Keepers' Association numbers 52 members—42 male and 10 females, showing a gain during the year of 31. Meetings are held quarterly. 36 members report as follows: Number of colonies of bees Oct. 1, 1881, 772; number May 1, 1882, 437; showing a loss during the winter of 281 colonies. Number of colonies owned Oct. 1, 1882, 709; of this number 391 were black bees, and 318 either Italian, Cyprian or hybrids. Number of colonies sold during the year, 119; number bought, 106; number of queens sold, 175; number bought, 73; pounds of honey taken, 5,437; pounds of wax, 335. Average amount of honey from each colony owned May 1, 1882, 12½ pounds. The average for the year before was 36 pounds.

97 bee-keepers, not members of the Association, had reported, giving the following results: Number of colonies owned Oct. 1, 1881, 1,092; number May 1, 1882, 863; number Oct. 1, 1882, 1,215; 739 of these were black; 476 were either Italians, Cyprians or hybrids. Number of colonies sold during the year, 164; number bought, 118. Number of queens sold during the year, 133; number of queens bought, 61. Pounds of honey taken, 16,003; pounds of wax, 459. Total number of colonies Oct. 1, 1881, 1814; number May 1, 1882, 1,300; number Oct. 1, 1882, 1,024. Of these 1,120 were black bees, and 694 either Italians, Cyprians or hybrids. 283 colonies were sold during the year, and 224 bought. Queens sold, 308; bought, 134. 21,440 pounds of honey were produced, and 790 pounds of wax.

Of hives used 31 were the Langstroth frame, 17 the Colton and other styles, 8 were the Gallup frame, and 8 the Quinby frame, 6 had the Torry and Maine standard hive, and 5 the shingle (Eureka) hive. Several other kinds were used by a few.

In wintering, 42 adopted placing the hive in the cellar; 40 winter on summer stands, and use packing in chaff, straw, sawdust, boughs, etc. A few winter bees in chambers, unoccupied houses or bee-houses built for the purpose.

The subject of feeding bees was introduced by a paper from Mr. Lucien French. His main points were, that feeding was essential both fall and spring, the latter time with all colonies, the former to weak colonies, so as to give them sufficient store for winter. The best feed was the purest sugar we could get. Never feed glucose. He had tried it, and it cost him dearly. Believed he was out $100 in consequence of the experiment. The best place to feed was inside the hive. To feed outside incited to robbing. To feed for brood-rearing, give a small quantity each day. If feeding for stores give it to them as fast as they would carry it away. A candy made of half a pint of water to four pounds of sugar melted and turned into shallow tins and laid upon the bars, was a good way to feed in winter.

Considerable discussion upon the feeding question followed the reading of Mr. French's paper. The points were that very much of the granulated sugar in market was adulterated with grape sugar. That in some cases bees would not always be incited to fighting by out-door feeding. The coffee A sugar was preferable as a feed for bees, especially in spring. Glucose or grape sugar was injurious to bees, and under no circumstances should it be fed to them.

To make bee-keeping profitable, was the basis of an essay by Mr. Hutchins. He thought our bees might possibly be superseded by some newer sort, but did not think that kind had been found yet. In wintering bees experience seems to prove that the hives packed in chaff were preferable to wintering in the cellar. The spring dwindling, that universal complaint, was due in great measure to wintering in warm cellars. Use frame hives, and examine the bees in the spring to know their condition. Cannot do it with the old box-hive. In dividing, do it so as to have each colony as strong as possible in as short time as may be. To keep bees profitably one must love the business, and make pets of his bees. Take and read some good journal devoted to bees. Keep up with the times, there is much to be learned yet. Keep a record of all the colonies and queens, and their qualifications and attainments. Have everything in readiness at the proper time, and never put off doing things which ought to be attended to immediately.

The question of wintering bees was discussed with a pretty strong leaning to out-door packing in some way. Those that had tried chaff packing had found it satisfactory. Some adhered to cellar packing.

SECOND DAY.

The election of officers resulted as follows: Mr. F. O. Addition, of Dexter, President; Wm. Hoyt, Ripley, Secretary; J. W. Hodgkins, Dexter, Treasurer.

Vice-presidents from the several counties were elected as follows: Aroostook, H. B. Chapman; Androscoggin, L. F. Abbott, Lewiston; Hancock, L. S. Brewster, Dennysville; Kennebec, H. B. Coney, Augusta; Penobscot, J. W. Hodgkins, Dexter; Piscataquis, W. A. Cotton; Waldo, J. W. Linekin; Somerset, S. W. Crockett.

A. B. Coney, Isaac Hutchins and Wm. Hoyt were appointed a committee to confer with the State Agricultural Society's officials, regarding future exhibits of honey and bee implements at the State Fair.

Mr. Isaac F. Plummer, of Augusta, gave his views and experience in providing pasturage for bees by sowing some special crop for that purpose. His experience had not been great, but he had tried it enough to know that to a certain extent it would pay to plant or sow for bees. Fruit-culture and bee-keeping, he thought, should go hand in hand, for fruit trees in bloom were a source of honey. In extending our orchards we extended the facilities for our bees to gather honey. Every farm has more or less waste land which might be appropriated to raising some plants for the bees. Where sweet clover will grow it is one of the best honey-producing plants we have. Another honey producing plant which blooms from July to October is borage. It is an attractive flower for field or garden. It needs a dry, rich soil in order to thrive. He sowed some last year, and it did finely. The bees worked upon it constantly. He liked the plant so well that he will sow more another season. Other plants with which he had had some experience as honey-producing plants were catnip, motherwort, boneset, figwort, spider plant, mignonette, Chinese mustard, clover, golden honey plant, etc. He thought if more attention was paid to this branch of bee-keeping it would be made to pay better, and he would advise all to plant largely of honey-producing plants, as he believed it would pay in the end.

In discussing this subject, the conclusions were that of the honey plants, sweet clover (melilot) was as good as recommended, and one of the best to sow for bees. Dutch clover or white honeysuckle was our best natural plant. Borage, by those who had tried it, was liked for its honey-producing properties. Basswood, in localities where it grew extensively, yielded much and a good quality of honey.

The question whether bees would work upon red clover to any great extent was discussed, the conclusion being that if other flowers were blooming in abundance red clover would be slighted, but where honey was short and red clover blossoms abundant, honey bees would visit it. Mr. Reynolds, of Clinton, had often observed black bees on red clover, but no Italians. Mr. Hoyt had seen the last named busily engaged upon it.

Mr. Addition said we should use great care in introducing new honey plants, not to spread noxious weeds upon the farm

The question was asked if it would be judicious to discard the German black bees in favor of the Italians?

None were so fully confirmed in their convictions regarding the newer races as to risk their success entirely upon them. Many favorable opinions were expressed of the Italian, Cyprian and others—pure and hybrid.

In stopping absconding swarms Mr. Hodgkins related a method which he found successful. He affixed an oblong piece of cloth to a pole and struck this amongst the bees as they circled away towards the woods. Always strike in the centre of the circle of bees, for the queen would be there, and if she was demoralized in her flight the bees would alight.

The committees appointed to examine the various hives and implements on exhibit, made their reports at the opening of the afternoon session. Three patterns of hives were shown; the Quinby closed end frame, Simplicity with Langstroth frame and the Eureka, carrying the Gallup frame. The committee gave the preference to the Eureka made by Mr. Addition. On feeders, of which there were a number shown, the first preference was given to those exhibited by Mr. Hoyt and Lucian French, the two being very nearly alike. Queen cage, to S. M. Crocker and Wm. Hoyt, extractor; 1st "Novice," shown by Mr. Hoyt; foundation machine, 1st to Lucian French; foundation, H. B. Chapman, 1st; L. French, 2nd; wax, Wm. Hoyt; transferring tools, L. French; and same on wired frame; foundation fastener, Wm. Hoyt; tongue registerer, Wm. Hoyt; entrance contractor, E. P. Churchill, North Auburn.

Secretary Hoyt had experience in rearing three or four different races of bees, called attention to the coming bee. In the first place, to determine the kind we will keep, we should consider the object to be attained. Some keep bees for pleasure, but most of us for the profit they bring. Now, the bees that will gather the most honey, are the ones that will give the most profit. How shall we attain the desired result? By a judicious crossing of different strains and races, and selecting those which give the best results. Colonies vary greatly in the honey-gathering capacity. Those that are the best should be noted, and from these rear the bees we keep. From what statistics he had gathered, thought the average of honey throughout the State, was not over 25 pounds to the colony. Was this satisfactory? After four years experience with yellow bees, was satisfied they were superior to the blacks. As to the different races of bees, he thought the Italians very industrious, amiable and beautiful, and better honey-gatherers than the blacks. From his experience thought the Cyprians the best honey-gatherers known. They were very prolific, and the most beautiful bee with which he was acquainted. As to their disposition it was not always to be depended upon for amiability. The Syrian bees he had had limited experience with. It was claimed that they were very prolific and good-natured as the Italians. The coming bee must possess the energy and hardihood of the Cyprians, the docility of the Italians, with the prolific qualities of the Syrian bee. He was not prepared to point out any particular course for bee-keepers to pursue, but we should not be content with 25 pounds of honey from a colony, when some of the best give 100 pounds or more. One advantage of old-time keeping over the present was the "survival of the fittest," as bees that did not gather sufficient store to winter, died off or were consigned to a brimstone place. Now, colonies short of stores are fed, and every queen kept alive if possible, whether they possess any good qualities or not. A queen should not be tolerated unless her progeny are possessed of the following qualities: Good honey-gathering; hardy to winter; easy to handle; yellow bands. Do not be satisfied with anything short of these, and thus hasten the arrival of the coming bee.

The subject of re-enforcing colonies, by a queen reserve system, was presented by L. F. Abbott, agricultural editor of the Lewiston *Journal*, entitled, "Pointing to a Practical Point." He began by saying that the first requisite to success in any business was to become acquainted with the fundamental principles upon which the business was based. To rightly understand bee-keeping was to become familiar with the nature and instincts of the bee. Much study by comparatively a few individuals during the past few years had brought to light many mysteries of the bee hive. The point of practical importance he desired to offer for consideration was that of providing reserve laying queens to be used at swarming time to provide re-enforcements for both the old colonies and swarms under certain contingencies. When bees are allowed to swarm naturally, much time is lost between the exit of the old queen and the time when the hive will feel the benefit of the progeny of the young queen; often amounting to two or three weeks. As the old queen goes out with the first swarm, matters at the old home are left in a sort of transition state; the women folks all stirred up and the boys fast leaving home. Some little fellows are continually emerging from the cells, the progeny of the old queen, but they, by the 21st day after the old queen turns her back on them, are all about house. In the meantime another swarm has gone out with a young, giddy and inexperienced queen, who remains with her family, but unable to perform proper duties for a number of days. This occurs at the season when honey is most abundant. Time is honey, and honey is money. What means shall we adopt to re-enforce these hives and bridge over this delay while these young housekeepers are getting ready to settle down to the real business of life? The remedy seems to be to partially adopt the system of artificial swarming in so far at least as to provide reserve queens, which, becoming fertile, will be in readiness to step into the old hive on the exit of the old queen, and also when her daughter leaves, and go immediately about the business of laying eggs. By their exchange the supply of reserve queens would be kept good, and non-laying queens be replaced immediately by fertile ones.

Mr. Hoyt, in reply to a question, remarked that the extractor could be profitably used in Maine. He believed it one of the most useful inventions of the age. He believed we could obtain much more honey by its use than in swarming for box honey. Should practice artificial swarming, if the extractor was used, as we could keep colonies more equalized in that way. Would extract as fast as the honey came in, and if colonies were short in the fall, feed for winter.

After some discussion, relative to the matter of place for holding the next meeting, it was left discretionary with the president and secretary.

Central Illinois Convention.

A convention was held in Bloomington, Ill., on Feb. 13, to organize a Society. Mr. J. L. Wolcott stated the object, and a committee was appointed to present a constitution and by-laws. 32 persons signed the roll.

The committee on constitution presented its report, which was adopted. The Association is known as "The Bee-Keepers' Association of Central Illinois."

The officers constitute a committee to select subjects for discussion, and to appoint members to deliver addresses and read essays. Meetings are held once in three months.

J. L. Wolcott was chosen permanent president, and James Poindexter, secretary. Mr. Wolcott spoke briefly of the importance which bee-keeping had assumed, especially in Central Illinois. He thought such an association was a necessity, and believed its work would be advantageous to all concerned.

Mrs. F. A. Baller was chosen vice-president, and O. Barnard, treasurer. The next regular meeting will be held on the second Wednesday of May next, at 10 o'clock a. m., an appropriate date, as at that season the bees will have swarmed, and topics of interest can be presented. The Association will meet at Surveyor Ela's office until further notice.

JAS. POINDEXTER, *Sec.*

SELECTIONS FROM OUR LETTER BOX

Bees in Cellar Doing Well.

In April I bought 5 colonies, increased to 11 by division, caught a runaway swarm and took 658 lbs. of extracted honey. Thanks to Cook's Manual and the BEE JOURNAL. Bees are in cellar, which is ventilated, as Prof. Cook recommended, and, so far as I can tell, are doing well. In the above report I should have used *we* (that would include my wife and little girl) instead of *I*, for I have not walked without the use of crutches for over 15 months. J. R. CRAIG.

Beatrice, Neb., Feb. 27, 1883.

Large Yields of Honey in Texas.

Several years ago I became acquainted with the AMERICAN BEE JOURNAL, and have profited much from its able writers, and now I look with delight for its more than welcome weekly visits, and it is not only necessary to have an able editor at its head, but it must be supported. The grand watch word is: "Keep all colonies strong;" yes, pile on your subscriptions by the thousands, and still there is room for more, and the JOURNAL grows. Does he split up this colony into 3, 5, or even 10, and make a little puny sheet out of each? No; if needs be he moves to a larger hive, where he can find more room, pile on story after story until the great BEE JOURNAL hive is filled full every week. Just so, when I take the editor's advice to keep colonies strong, by adding story after story, not by doubling up two or more colonies, but by simply giving the one colony plenty of room as it increases, thus preventing any division by natural swarming, whereby I am enabled to get 300, 500 or 800 lbs. of extracted honey from single colonies, the cry is "such reports may be *true* in fact, but totally unfair, and therefore unreasonable." I cannot see the unreasonableness of such reports. Do not the authors of these reports tell how they accomplish these grand results? A Texas Hoosier is not particular about the spoon, a cow's horn will answer in case of necessity. Texas is a big State, her bee pasturage grand, and with a continued honey flow from 30 to 50 days, there is nothing "unreasonable" at all about our reports. Did not Dr. J. E. Say (a noble specimen of Texas' bee-keepers) say at the last National Convention, that he made an average of 300 lbs. per colony? J. S. Tadlock, of Luling, had 247 lbs. per colony, and had nearly 500 lbs. from one. This is not all; the grand news will be wafted from Maine to California, that Texas has produced a ton of honey from a single colony, and its legitimate increase, in one year, and when she does this, do not say it was unfair. Let us have a little more charity. Are we not inmates of that great hive of nature? And if my spoon is a little larger than the Iowa spoon, by 62 lbs., just go to work and make it larger.

Dresden, Texas. B. F. CARROLL.

[Mr. Carroll is referred to page 115, where, we think, he will find a satisfactory explanation.—ED.]

Mice as Bee Enemies.

On page 96, Mr. H. J. Northrup tells how Mr. O. has wintered his bees successfully for 12 years. That is good; but here it would be a "sweet jubilee" for the mice. We have, besides the common mouse, a timber or field mouse. It is dark on the back, brown on sides, white throat and belly, with fur on the upper edge, and rather short tail. We also have the mole with its peaked nose; that pushes its way through on top of the ground under the snow, grass or leaves. Have they those three to contend with in winter among their bees in Lansingburgh, N. Y.?

Limerick, Ill. E. PICKUP.

Feeding Poor Honey in Spring.

I began the season of 1882 with 4 colonies, in box hives; have taken 440 lbs. of comb honey from them and their increase (mostly from the increase) in 1 and 2 lb. sections. I have sold nearly all at about 16 cts. per lb., and increased them, by natural swarming, to 13. But, owing to the lack of experience, they were rather light in stores, the sections having been left on too late to give them stores enough for winter. I had to feed 80 lbs. of sugar. I had everything to buy for working the apiary, most of which will come in use this season. My expenses were $95, and counting the goods on hand at a low price, and cash received from sale of honey, I have made $16 on the investment, without setting any price on the bees; if they winter through, I shall be that much more ahead. Some of the colonies appear to be wintering all right, packed in sawdust with chaff on top of frames. Two colonies I packed with sawdust on top of frames, as an experiment; one of which suffered with dysentery, until the 15th, when the weather became warm enough for them to fly with safety. The colonies in the box hives I left on the summer stands, without packing. They have suffered with dysentery, and one is dead. It did not do well last summer, sent out two swarms, but did not gather any honey in sections; the combs were very wet, and some were a little moldy. There was 12 lbs. of honey in the hive, and 2 combs contained some capped brood in the centre of cluster. About three weeks before I found they were dead, they seemed to be all right. The weather turned cold, and, on the 14th, I found them dead. I think their death was caused by too much dampness in the hive, as it was very wet throughout. Will it do to feed this honey to the bees in the spring? The combs showed some signs of dysentery, and some are a little moldy.

ALFRED GANDER.

Adrian, Mich., Feb. 19, 1883.

[Yes; when the bees have a chance to fly you can feed them almost any kind or quality of honey without danger.—ED.]

Will Freezing Eradicate Foul Brood?

I would like to inquire, through the BEE JOURNAL, of Mr. D. A. Jones and others, in regard to freezing hives, combs and honey that contained foul brood last summer. The bees cleaned it out of the comb after they stopped brood-rearing in the fall, and the bees were changed into new hives. Would it be safe to use them next summer, after being frozen as hard as they have been this winter? Mr. Jones claims that boiling will kill it. Is not freezing as good as boiling?

O. E. BURDEN.

Birdsall, N. Y., Feb. 24, 1883.

Wintering Bees in Dakota.

I removed the snow from my bees to-day, and found 4 colonies out of the 11 had died; 2 were in Simplicity hives, 1 American, and the other a Langstroth that had no upper story. The rest of the colonies, in Langstroth hives, were all right, and the day being warm and pleasant, the bees had a good flight, the first since Nov. 20. They seem to be in splendid condition. I do not want any more Simplicity or American hives to winter bees in. I am satisfied out-door wintering, with hay packing, in Langstroth hives, is the best way.

WM. W. EASTMAN.

Yankton, Dakota, Feb. 28, 1883.

Old Fogy Notions.

On page 42 of No. 3, of the BEE JOURNAL, I am made to say 33 colonies, when it should be only 23. In the fall of 1881, at the time when I should have been preparing my bees for the winter, I had to serve 3 weeks on the jury, but we had a mild, open winter, and, contrary to the general ideas and practice, I worked with them many times during the winter, and with no bad results, and this last fall I was summoned as a witness on two different occasions, and my bees were again neglected. I am anxiously watching for a nice warm day, that I can look after their wants, as they are keeping up a loud roaring in their sheltered location. As we, in this section, have but little else than ignorance to report concerning bee-culture, and believing that none but true reports should be made, I will give your many readers a faint idea of it. When I launched out in the business I had a partner, and we were getting bees in the timber, and my partner, one day, asked a German boy if he had seen any bees? The boy replied that his brother-in-law had some pretty nigh a soda bottle full already; that he runs and catches them on the flowers, and when he gets that soda bottle full he will make a colony, and then they will make honey in it. An Englishman, about four miles east of me, had some buckwheat, and he discovered the bees working on it; he then hurried down to his neighbor Johnson, that he could learn if they would injure the grain. Johnson told him that he could not see why they would not injure it, that they were certainly robbing it of the substance that formed the grain. He very hurriedly got a brush and went in to drive them out, he said, but as all can imagine, they were not to be driven.

Illinois City, Ill. E. F. CASSELL.

Damage to Bees by the Flood.

The flood has subsided, and now I know the amount of damage done to my bees. I had 85 colonies drowned outright, besides some damage to the others from taking them out during a cold rain; the water was 4½ feet deep in my bee house. Pretty severe, but I will show you before the end of the year what I can do in the way of building up. L. H. SCUDDER.

New Boston, March 2, 1883.

Bees in Fine Condition.

I have 72 colonies on the summer stands, in the Langstroth hive, and 36 in the cellar, and all are doing well; all alive yet, and not one showing any signs of dysentery. Will say to S. G. Holley he has a young apiarist, but I have a little girl of 3 years who can open my observatory hive, and find, and point out the queen, among other bees, to visitors. I suppose they would make a good convention of bee-keepers of themselves.

DANIEL WHITMER.

South Bend, Ind., Feb. 27, 1883.

The Prospect in Kentucky.

The past winter, with us, has not been as cold as we sometimes have it, but it has been one of the most disagreeable ones we have experienced for several years. The changes have been frequent and very sudden, consequently our bees have suffered severely. It is the general practice with us to winter bees on the summer stands, and often without any packing or protection whatever. The fall was very favorable for gathering in winter supplies, consequently our bees were strong both in numbers and supplies. But few colonies have died, yet all have dwindled very rapidly, and many will be so weak in numbers as to necessitate wintering with others. The 14th and 15th were beautiful days, and warm as May, and our little pets made full use of them. In looking through several colonies I found brood in all stages, and queens busy. Since then they have not been permitted to fly. The prospect, however, for a good honey crop is very favorable. As we had but little fruit last year, our fruit trees will be sure to furnish an abundance of bloom. Also, black locust, basswood and other honey producing trees. But most cheering of all is our prospect on white clover. The winter has not injured it in the least; our fields are densely sodded with it, which, even in these few warm days we have had, is showing cheerful signs of starting. Last year, at this time, I could scarcely discover it at all, yet it came out well. With these hopeful signs from vegetation, if we can get our hives strong by the first of May, we hope to roll up a list of statistics which will make Dr. Miller, and that man with his 500-pound colony, "come again." L. JOHNSON.

Walton, Ky., Feb. 25, 1883.

Experiments in Wintering.

To-day has been nice and warm. Bees all out. I made an examination and found that out of 12, with no protection, 5 had died; that out of 5, with outside protection, 2 had died; that out of 80, in chaff hives, 1 had died. There are signs of dysentery, but I think to-day's flight will cure that trouble, and, as I do not expect "spring dwindling" in chaff hives, I have commenced whistling! How is chaff with you over in Indiana, Mr. Kite? C. W. McKOWN, 60-130.

Gilson, Ill., March 1, 1883.

A Profit of $37 Per Colony.

I commenced the season with 25 colonies, Italians and hybrids, and have taken 5,000 lbs. of honey, mostly extracted, and doubled the stock. I have sold most of the honey at an average of 16 cts., making me a profit, the way I figure it, of $37 per colony, spring count. MILO SMITH.

Greenwood, Polk Co., Iowa.

Sawdust Packing Ahead.

Our bees flew well yesterday and to-day, for the first time since Nov. 15. From 137 colonies packed in chaff and sawdust, 2 are dead. Nearly all are in prime condition. Sawdust is ahead of chaff for packing. Colonies, with entrances ½ inch wide by 11, wide open all winter, are in far better condition than those with entrances ⅜ in. by 4. H. D. BURRELL.

Bangor, Mich., March 1, 1883.

The Season in California.

Our bees have wintered splendidly. The white willow commenced yielding honey, this winter, November 26, fully 3, if not 4 weeks earlier than usual, and it has yielded most abundantly; so much so, the queens are crowded out (in the strong colonies) and the extractor must be used or we will have light swarms to go into the mustard harvest with. Alfalfa is coming into bloom, but will not be at its best for two weeks yet. We are well pleased with our hybrid Holy Lands; they are rustlers. I speak of them as hybrids, for we have the second generation of queens, mated both times with Italian drones, and the progeny (so it seems to us) possess many of the desirable traits so much looked for in the "coming bee." We think we have had rain sufficient to give us a moderate harvest in the valley (rain fall up to date 6 inches), but this will give us no sage honey at all. Last year we had four inches of rain after this time, so we are hopeful yet.

A. W. OSBURN.

ElMonte, Cal., Feb. 25, 1883.

Convention Notices.

☞ The Union Bee-Keepers' Association will meet in Grange Hall, Eminence, Ky., on Thursday, April 26, 1883. All bee-keepers, and the public generally, are invited to be present.

G. W. DEMAREE, *Sec.*

Christiansburg, Ky.

☞ The Texas State Bee-Keepers' Association will hold its Fifth Annual Convention at McKinney, Collin Co., on Tuesday and Wednesday, April 17th and 18th, 1883; at the residence of Hon. W. H. Andrews.

WM. R. HOWARD, *Sec.*

Kingston, Texas.

☞ The next meeting of the Haldimand, Ont., Bee-Keepers' Association will be held at Nelle's Corners on Saturday, March 31, 1883, at 11 a. m.

H. CAMPBELL.

☞ The Western Bee-Keepers' Association meets at Independence, Mo., April 28, 1883.

S. W. SALISBURY, *Sec.*

☞ The Eastern Michigan Bee-Keepers' Society, will hold its annual meeting in Detroit, April 3, in Abstract Hall, commencing at 10 a. m. An interesting meeting is expected, and bee-keepers are requested to send items or questions of interest to the secretary in time, that they may be announced previous to the meeting.

A. B. WEED, *Sec.*

75 Bagg St., Detroit, Mich.

☞ The Central Michigan Bee-Keepers' Association holds its spring convention at Lansing, in the State Capitol building, on Tuesday, April 17, 1883, 9 a. m. Programme: President's address (Prof. A. J. Cook), on Wintering Bees. Essays: S. C. Perry, on Chaff Hives; C. Case, on Comb Honey; O. S. Smith, on the Best Bee; A. D. Benham, on Extracted Honey; Mr. Harper, on Queen-Rearing; Mr. Waldo, on Best Method of Wintering Out of Doors, in Single-Walled Hives; E. N. Wood, on Sections; and E. Greenaway, on Comb Foundation. All bee-keepers are invited to attend or send essays, papers, implements or anything of interest to the fraternity. A full attendance is requested.

E. N. WOOD, *Sec.*

North Lansing, Mich.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

Our Premiums for Clubs.

Any one sending us a club of **two** subscribers for 1 year, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For **three** subscribers, with $6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For **four** subscribers, with $8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For **five** subscribers, with $10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

☞ Several correspondents ask if it is essential to write only on one side of the sheet of paper when preparing an article for the JOURNAL. For us, it is just as well to write both sides, and saves postage in sending it.

Special Notice.—We will, hereafter, supply the Weekly BEE JOURNAL for 1883 and Cook's Manual in cloth for $2.75, or the Monthly and Manual in cloth for $1.75.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., March 5, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—Extracted, dark 7c. light, 9c. here.

BEESWAX—It is quite scarce. I am paying 30c. for good yellow wax, on arrival; dark and off colors, 17@25c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—There is no excitement in the honey market, but sales are fair to our regular trade. Offerings are plentiful of extracted and comb honey. Extracted brings 7@9c. on arrival. The sales of comb honey are very slow, although there is a large supply of first-class quality on the market. It brings 12@18c. on arrival.

BEESWAX—Comes in slowly and brings 20@30c. per lb., according to quality. CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The past month has not reduced the stock of comb or extracted honey, the receipts having been larger than the amounts taken for consumption. Prices are weak and irregular, ranging from 16c. to 18c. for white comb in the smaller frames; dark, very little selling, offered at 12½c. to 14c. Extracted, 8c. to 10c., according to color.

BEESWAX—32@33c. per ℔. for good.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—Offerings of comb are mostly of ordinary quality, and holders are disposed to close out at concessions. Market for beeswax is quite firm, with stocks quite limited.

White comb, 14@17c.; dark to good, 11@13c.; extracted, choice to extra white, 8½@9½c.; dark and candied, 5@7½c.

BEESWAX—We quote 27½@32½c.

STEARNS & SMITH, 423 Front Street

ST. LOUIS.

HONEY—Very quiet; dull. Comb at 14@16c., strained, at 6½@7½c., extracted at 7½@8½c.—lots in small packages, more.

BEESWAX—Scarce, firm; quote choice at 28@30c., dark at 22@24c.

W. T. ANDERSON & Co., 117 N. Main Street.

CLEVELAND.

HONEY—Is very slow, just now hardly anything selling, stock on hand quite liberal. Sales slow at 19@20c. for best white 1-lb. sections; 18@19c. for 2-lb. Second grades not inquired after. Extracted very dull at 9@10c. in bbls. and 11@13c. in cans.

BEESWAX—Scarce, 28@30c.

A. C. KENDEL, 115 Ontario Street.

NEW YORK.

HONEY—Choice to fancy white clover honey continues scarce and firm, but buckwheat and extracted honey slow and irregular.

We quote: White clover, first quality, 1 ℔ boxes, 24@25c; fair to good, 22@23c.; buckwheat, 15@17c. Extracted, clover, 10@13c.; buckwheat, 9@10c.

BEESWAX—There is only a moderate supply of beeswax and prime lots held firmly.

Western pure, 30@32c; southern, pure, 31@33c.

D. W. QUINBY, 105 Park Place.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—Our supply is gone; we have none to quote.

CROCKER & BLAKE, 57 Chatham Street.

Notice.— Bee-Keepers, we call your special attention to the advertisement of Champion Bee-hive Manfactory. 2t

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

☞ We have a few copies of our pamphlet entitled "*Bee Culture*" left, and have reduced the price from 40 to 25 cents each, or $2 per dozen.

Headquarters in the West

Having fitted up our shop with new machinery, we are prepared to furnish all kinds of

APIARIAN SUPPLIES,

Simplicity, Chaff, Langstroth and other hives.

BEES AND QUEENS.

One-Piece Sections, $5.00 per 1000.

Dunham Foundation at bottom prices.

Silver Hull Buckwheat, $1.50 per Bushel.

Job Printing done on short notice.

LARGE, NEW LIST, FREE.

BRIGHT BROS.,
Mazeppa, Wabasha Co., Minn.
A10, 14, 16

Important to Bee Keepers

Our New Book is now ready for Delivery.

THE ONLY WORK DEVOTED TO QUEEN-REARING EXTANT.

Every bee-keeper should have a copy at hand, as it not only gives

MY NEW METHOD OF REARING QUEENS,

but also the results of

Twenty-five Years' Experience as a Practical Apiarist.

The work also contains an essay, by one of the most practical, prominent and successful bee-masters in New York State, on

The Best Management of the Apiary

to obtain the largest amount of surplus honey, including preparing for and marketing the same.

Also, an essay on

The New Races and Coming Bee,

by a former superintendent of the queen-rearing department of the apiary of D. A. Jones, Beeton, Ontario.

The work contains 150 pages and is intended as a "handy book" for bee-keepers, and much that is new and valuable never before published, will be found by a perusal of its pages.

Price (bound in cloth), by mail, $1.00.

Enclose the money in presence of the postmaster at my risk. Those who so desire may remit on receipt of book.

HENRY ALLEY,
Wenham, Mass.
10Dtf

CHEAP! CHEAP!

LANGSTROTH HIVES!
SIMPLICITY HIVES!

All kinds of hives and surplus comb foundation, etc., etc. Having superior advantages for the manufacturing of hives and of procuring lumber low, I can furnish very low rates.

Send for descriptive circular.

A. D. BENHAM,
Olivet, Mich.
10Atf

WANTED an expert, possessing the necessary credentials, to act as manager, with or without a share, in establishing an apiary at Macleay River, in New South Wales. Address terms, etc., to the undersigned, from whom other information may be obtained. A. VERGE, E. Kempsey, Macleay River, New South Wales, Australia. 10t1

POTATOES AND STRAWBERRY PLANTS!

Send for Circular and Price List of the "Jordan's Prolific" Potatoes, and "Big Bob," "Nigh's Superb," and "Wilson's Albany" Strawberry Plants, to J. D. KRUSCHKE, Sidney, Ohio. 10A4t

THE BRITISH BEE JOURNAL
AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published monthly, and contains the best practical information for the time being, showing what to do, and when and how to do it. Rev. H. R. PEEL, Editor.

We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal*, both for $3.50 a year.

THIS PAPER may be found on file at Geo. P. Rowell & Co.'s Newspaper Advertising Bureau (10 Spruce St.), where advertising contracts may be made for it in NEW YORK.

OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

VOL. XIX. CHICAGO, ILL., MARCH 14, 1883. No. 11.

OLDEST BEE PAPER IN AMERICA
THE AMERICAN BEE JOURNAL
ESTABLISHED IN 1861

Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

To Our Correspondents.

"Every day and hour," at lightning speed, over every railroad centering in this great city, come letters to the BEE JOURNAL from all parts of the world—east, west, north and south of this American continent, as well as from Europe, Asia, Africa and Australia. (A few days ago, one mail brought us foreign letters from England, France, Sweden, Mexico and Australia.) Letters of business or inquiries which call for answer by return mail. Letters of praise or blame, of approval or disapproval, of commendation or condemnation of something in the BEE JOURNAL! Letters to the Editor, either kind and complimentary or full of malicious abuse, which are intended to excite to enthusiasm or goad to desperation!!

Of course, we know the Editor must be *cool* and *collected* at all times, but to talk of his "easy chair" is a mockery.

During the winter months, many bee-keepers have little else to do but read, criticise and write to the BEE JOURNAL—and the number of communications on hand now, is simply overwhelming. In order to accommodate as many as possible this week, we have determined to omit the usual editorials, etc., and, "without further ceremony," present our readers with as many letters and communications as we can crowd into the paper. We will give all, as fast as possible. Some have concluded that their articles have been consigned to the waste basket, and ask for our reasons for doing so; others demand their return, etc. Exercise patience, eat a little more *honey* to keep good-natured—omit "stings," and all will go well in a few weeks.

SELECTIONS FROM OUR LETTER BOX

The Coldest Yet in New York.

The thermometer stood at 16° below zero here this morning, which is the lowest, so far, this winter. Bees had a partial flight 3 days ago, but, as the wind was strong, many were lost on the snow. They had been confined so long, that "fly they would," except a few colonies which were banked up with snow. One colony is no more, and 3 or 4 others are in bad condition, having the dysentery. Those in the cellar are quiet and nice, so far.

G. M. DOOLITTLE.

Borodino, March 5, 1883.

Bees All Right.

My 44 colonies all answered to roll-call to-day. It has been a very cold winter here. Bees crawled up among their combs on Dec. 13, and remained there until to-day, March 4, when they had a good fly. C. E. MILLER.

Justus, Pa., March 4, 1883.

Chaff for Wintering.

I have looked over my 135 colonies; they are all right; they are clean and nice except 3 or 4 that have commenced breeding; which have some dead bees, and look demoralized somewhat. I would say to Mr. Christiancy that my chaff has "come it," so far. Some correspondents think brood a good sign. I think it a sure sign of "spring dwindling."

E. B. SOUTHWICK.

Mendon, Mich., March 6, 1883.

My Report for 1882.

I increased from 15 to 53 colonies, mostly by natural swarming, divided a few early in the season. Took off 1,000 lbs. of comb and 1,150 lbs. extracted honey. I am using the "Common Sense" hive. My bees are wintering well on their summer stands without protection. H. W. HITT.

Merritt, Ill., March 7, 1883.

Letter from Florida.

The weather here is warm and delightful; the orange trees are in full bloom, with the huckleberry, yellow jessamine, willow and other flowers, afford the bees excellent pasturage, and they are making good use of the opportunity to store honey. Brood-rearing is going on fast, and the prospects are good for swarming by the first of March. We have been visited by "Northern Lights," in the shape of O. O. Podpleton and wife, of Williamstown, Iowa; they left here last week for Lampa and the Gulf Coast, previous to returning home, leaving behind them a number of friends and well wishes, besides much valuable information pertaining to practical bee-culture. H. MITCHELL.

New Smyrna, Fla., Feb. 18, 1883.

Right and Clear.

I desire to publicly thank Dr. Southwick for his manly utterances, on page 127, of the BEE JOURNAL for March 7. The contrast between the Doctor's clear vision and that of the near-sighted who cannot tell precisely about the property rights of others, is positively grand. J. M. SHUCK.

Des Moines, Iowa, March 8, 1883.

Bees Wintering Well in Massachusetts.

My bees are all on the summer stands, and wintering well. They had a fine flight on Feb. 17, the first since November. The glass ran up to 59° in the shade, and 79° in the sunshine. I am testing a new feeder; it is placed under the cushion. The bees can take the food from it without leaving the cluster, and the feeder can be refilled without disturbing it or the bees. I find it an actual necessity, as many of my colonies are short of stores.

HENRY ALLEY.

Wenham, Mass., Feb. 24, 1883.

Bees All Right in Iowa.

The winter is beginning to disappear; the snow is gradually going off, still now and then we have a cold morning. It was 4° below zero on March 7; but it is warmer to-day. Several days, lately, the bees that were on the summer stands, flew out; many that were unprotected are dead. Those in good cellars are all right yet.

J. W. SANDERS.

Le Grand, Iowa, March 8, 1883.

Large Yields of Honey and Increase.

When I see reports of large yields of honey and great increase of bees, I always know what I think of it. In his book of "The Hive and Honey Bee," Mr. Langstroth says that a large increase of bees and a large yield of honey cannot be had at the same time—and I am satisfied that he is right. WM. ROBERTS.

Vaughansville, O.

Bees in Splendid Condition.

Our first step, after purchasing 40 colonies of bees, in box hives, was to send for the ever-welcome and indispensable Bee Journal. Our apiary is on an elevation, known as East Hill, descending to the west, ¼ of a mile from the beautiful city of Elmira. From our apiary every part of the city can be seen. Near by is the Chemung river (local name); on either hand, as far as the eye can penetrate, lies the valley of Chemung, teeming with a busy population, but without a bee-keeper for miles around. We have (for the want of a better place) wintered our bees in a plastered room. I succeeded in keeping them very quiet until the latter part of February, when I was compelled to move them to their summer stands. They are in splendid condition, and I hope to be able to give a good report in due time. No expense or labor will be spared to accomplish our purpose, which is to have as fine an apiary as can be found in New York. We shall use the two-story Langstroth hive. Which is the best time to transfer to the new hives? I have transferred early and late, but did not register the results.

Colegrove & Beach.
Elmira, N. Y., Feb. 25, 1883.

[The best time is during fruit bloom; for there is less honey in the hives, and fewer bees. They will more readily fix up the combs when when they have some honey to gather.—Ed.]

Bees Saved a House.

My bees were on the roof of my house, at Shawneetown, Ill., during the great flood. They endured the waves and high winds, and are all right. Had it not been for the 140 colonies on the house, it would have floated off, as many other houses of similar size, in the neighborhood, are gone.

R. Cadle.
Mt. Vernon, Ill., March 1, 1883.

Cellar Wintering Suits Me Best.

We are having an unusual cold winter here. It commenced snowing sometime in December; the ground has been covered ever since, and now, at present writing, is, I think, about 18 inches deep, if it was not drifted. I think it will be just as bad on bees that are out of doors as it was two years ago, and I expect to hear of as many dying as then. Some of my neighbors, that have a few colonies, tell me they are nearly all dead. I only have 11 on the summer stands; 9 in chaff hives, and 2 in Simplicity hives, without any protection. They are both alive, so far, but one of them has been in the upper story on five combs, and are about one-half dead. I have brought them into the house, that is, the top story with the bees; the lower story has 10 frames filled with sealed honey and ice; this will learn me not to leave any more bees in the top story for wintering. One of the colonies in chaff hives, is dead, and another one or two have the dysentery. I have 42 in the cellar that appear to be getting along finely, and I have about come to the conclusion that cellar wintering suits me best. My cellar is very dry, and I have a stove pipe attached to the outside door, and have ventilation inside also. One of my neighbors found a bee tree, and I happened along just they had taken the honey; about one-half the bees were clustered in the side of the tree, where they had taken the honey from. I looked at them a while, and said to the parties, it looked like a shame to let them freeze, as the thermometer was, at that time, below zero. I walked on home, studying about the matter, and when I got there I told my wife about them, and she asked me if I could not save them? I told her I would try, and so I picked up a market basket and some flannel cloths, and a garden trowel to scoop them up with, and went back and brought them home, warmed a couple of frames of honey and put them in a hive; kept them by the stove all night, and next morning put them in the cellar; they are doing finely, and I calculate to make a good colony of bees out of them.

Milo Smith.
Greenwood, Iowa, March 1, 1883.

Bees in the Cellar All Right.

I commenced the season, June 1, 1882 (which was the poorest for some years), with 20 colonies, in poor condition, owing to the cold spring; increased to 50; extracted, July 1, 250 lbs.; fed back about one-third, to late swarms; the balance is my surplus yield. I put 50 colonies in the cellar under the house; it is a dry one, 65 feet above high water mark. I manage somewhat on the plan of Mr. Ira Barber; I threw in and saturated my cellar with 6 or 8 pails of water, before putting in the bees; it has no ventilation, except a door to the kitchen, to be opened when needed. To-day, I cleaned off the front of the hives, and swept the cellar bottom clean, not getting 1 pint of bees. I used a lamp, and, during the operation, not a bee flew out. A light roar only was heard, but all answered to "roll call." I never knew bees so quiet after three months' confinement.

J. B. Ide.
Climax, Mich., Feb. 20, 1883.

Bees Down in Maine.

We are having a hard winter for bees down in Maine. The weather has been cold ever since Dec. 1, and it looks now as though we might have another grand disaster, like the season of 1880-81. Part of our bees are in single hives, and part in chaff hives; the chaff hives and a part of the single hives were covered, so as to stop the entrance up, by the first snow that came in November, and have been covered ever since, and the bees have had no flight since the first of November. The other hives are in a sunny place, and, in the middle of the day, bees have flown a good deal through the winter. They have dwindled badly, and show signs of dysentery. In three of them, the bees have left the combs and are occupying the bottom boards. Those in the hives under the snow, that have not flown the entire winter, are looking all right, and have not consumed half as much honey as those that have been flying. Such a winter as this makes me yearn for a cellar to winter my bees in. Will some one, having wintered bees in a cellar with success, give us a rousing article on how to ventilate a damp cellar. My cellar is not what might be called a wet one; there is a spring in one corner, so there is water in the cellar at all times, and still the bottom of the cellar is not wet. Is there any way to ventilate such a cellar, so that it would be a proper place to put bees, and, if so, how? Will some one give plain, simple instructions how to do it.

J. B. Mason.
Mechanic Falls, Maine, Feb. 25, 1883.

Lost One Colony.

I have lost one colony, so far, this winter, the cause of which we cannot account for. They had about 20 lbs. of honey left. Our bees are all in improved Quinby, chaff-hives, same as they were in 1880-81. Then we did not lose a colony. The others are all right. I do not expect to lose any more. I should be glad to see more letters from lady correspondents. I have just read Mrs. C. J. Allison's experience, on page 110. Let us hear from more lady bee-keepers.

S. S. Bristol.
Galesburg, Mich., Feb. 26, 1883.

No Profit Without the Bee Journal.

I have read the Bee Journal for over 18 months, and cannot do without it. I have kept bees for 40 years, but I obtained no profit until I commenced to read the Journal, and there saw that box hives were not the kind of hives to use. I commenced, last spring, with 22 colonies in boxes, and all kinds of hives, except the Langstroth. I got 24 Langstroth hives and filled them, mostly by natural swarming. I have now 44 in the cellar; they seem to be all right, yet have not had a flight since Nov. 15. I got 100 lbs. of surplus comb honey this year. I have a farm of 560 acres, and keep about 150 head of cattle, but I am 59 years old, and expect to make bee-keeping a part of my business. I shall sow nearly ½ bushel of sweet clover seed this spring.

E. S. Hovey.
Swanton, Iowa, Feb. 28, 1883.

Remedy for Bee Stings.

Bees did not have a good fly from the time winter set in (which was about Nov. 15) till Feb. 16. Mine are all in good condition except one, in a single-walled hive, which is very uneasy, and has the dysentery slightly; the rest are in Simplicity chaff hives, with inch holes in gables of covers. The single-walled hive had only a hole at one end of the cover, and consequently the chaff packing above the cluster was very damp, so much so that I changed the packing and raised the cover by putting nails under each corner. This shows the necessity of sufficient ventilation above the packing to let off any excess of moisture. 1½ or 2 inch holes would be better than 1 inch; the latter not being sufficient, in my chaff hives, to keep the chaff as dry as I would wish. Here is another remedy for bee stings, taken from "Peterson's" for March: Honeysuckle—*Lonicera Japonica* and *L. Caprifolium.* Ornaments of our gardens, lawns and piazzas. A syrup prepared from the sweet-scented flowers has been used with benefit in some cases of asthma. The expressed juice of the leaves is used to relieve the pain and inflammation of bee stings. Who has ever tried it?

JOHN S. SNEARLY.
Williamsville, N. Y., Feb. 25, 1883.

Drones Now in the Hive.

My bees were shut up from about Nov. 1 until Feb. 16; they flew on that day. I have been sick and confined to the house since Jan. 4; on Feb. 16, it was very warm and pleasant; in the afternoon, about 3 o'clock, I went out to look after my bees. Upon looking at one colony, having a black queen, mated with an Italian drone, that did well last summer, I noticed a drone leave the hive. To satisfy myself that I was not mistaken, I sat down to watch for his return. In about 5 minutes 4 drones entered the hive. I have had some experience with bees, and have read a good deal, but never noticed any account of drones this time of year. I have 22 colonies; they looked all right on Feb. 16, there were no signs of dysentery; they looked slim, and were active.

H. M. GROVE.
Titusville, Pa., Feb. 28, 1883.

[Drones are sometimes tolerated in the hives all winter, if the colony is queenless; which yours probably is.—ED.]

Preventing Increase.

In reply to J. B. Hall, I will state that I have practiced the method of disposing of natural swarms, as given by Prof. A. J. Cook, on page 474, of the BEE JOURNAL for July, for several years, and found it a perfect success, before writing it for *Gleanings*, 4 years ago, when Mr. Root said it might do, but was sure they would swarm and swarm over again. How did he know when he had never tried it? Does Prof. Cook claim the idea as originating with himself?

Carson City, Mich. HIRAM ROOP.

An Enthusiastic Beginner.

Last spring I commenced with 2 colonies, and made them into 10, but got no honey, the season being poor. I have taken great interest in this (to me) new business. Have read enough, the last 12 months, to set up a dozen bee-keepers, and remember about half enough for one. I lately read the last year's volume of the Weekly, the loan of which I got from a friend, and was particularly pleased with the letters of Messrs. Heddon, Doolittle and Hutchinson. Mr. D.'s plan of collecting the valuable, as mentioned in the issue for Feb. 14, is good. I have my bees in a bed room, and think they are all right, so far. They have been very quiet, still quite a number comes out to die. I am longing to see the industrious little creatures at work again. I hope that the coming season will be good, and that we will get some honey. A great depth of snow has been covering this part of the country, but a thaw on the 16th and 17th turned, perhaps, a third of it into water, which sunk into the ground, there being little or no frost below.

F. MALCOLM.
Innerkip, Ont., Feb. 20, 1883.

The Bees in Cellar All Right.

I have just finished carrying out the bees to-day. All colonies are alive, and in good order. I put them in the cellar on Dec. 7. I have 34 colonies. I started, last spring, with 11, all in Langstroth hives. I feel quite provoked, after reading in the BEE JOURNAL about the dimensions of the Langstroth hive to find, on measuring my hives, that they are too small; the frames are only 16x8 inches, and the brood chamber contains only 1,800 cubic inches, in the clear.

JOHN J. STENGER.
Fort Madison, Iowa, Feb. 23, 1883.

Bees Easy and Quiet in the Cellar.

I commenced, last spring, with 30 colonies; some were very weak. I had to feed most of them, up to June 1, to save them from starvation. I got 3,200 lbs. of honey (2,000 lbs. of comb, and 1,200 lbs. of extracted); increased to 41 colonies, which are in the cellar and seem to be wintering nicely; they are quiet. They became somewhat restless about two weeks ago, when it was raining, and the snow melting off. I put a ball of snow in front of each hive, in the portico, and as it melted they got water from it and became quiet, and have been so ever since. The thermometer stands at 65° to-day.

MRS. A. B. WINDER.
Grand View, Iowa, March 1, 1883.

Too Much Pollen.

Ten of my colonies are all right, so far; 5 have died (1 starved, the other 4 had the dysentery); they were the strongest colonies I had. Those fed with granulated sugar are all right. One of the colonies that died had the hive full of bees on one side; it had a comb with pollen, and all the bees on that side had the dysentery; and an awful mess there was. The bees on the other side of the hive, without pollen, were as dry as they are at midsummer. Next fall I shall feed them all with granulated sugar syrup, and take out all the pollen.

Racine, Wis. HUGH WILLIAMS.

A Cold, Cold Winter.

We have had some very cold weather, Dec. 7, it was 26° below zero; Jan. 21, 40° below; 22, 36°; 23, 34°; and Feb. 5, 29°. We have had two days in this month that it has thawed, and the mercury reached 43° above zero. We have 3 feet of snow on the level; we had to shovel snow from the roofs of our buildings, to keep them from being crushed, by the weight. I have lost 1 colony of bees with dysentery, and I am fearful for the rest, if we do not have a day soon that they can have a good flight. They have been housed for 114 days. The BEE JOURNAL is always welcome, and I read it through before I leave it. I think we will have a good season for honey, in this part, for the ground is well protected, and no frost in it. We hope for the best. I shall be glad when I can hear the hum of my pets, and see them bringing in pollen for their perpetuation.

EDWIN BUMP.
Marshfield, Wis., Feb. 21, 1883.

Bees Flying To-Day.

The mercury is 50° above zero, and the bees are now flying a little, for the first time since Nov. 11. My bees have wintered well, so far; they have been under a snow drift, all winter, with the snow kept away in front, so that they could get fresh air. I think we have a pretty even temperature up here for wintering bees on the summer stands. The coldest it has been is 10° below zero twice, and it run up to 27° above zero before noon both days, and it has not been higher than 45° above. Most of the time it was from 35° to 40° above zero.

G. L. PRAY.
Petoskey, Mich., March 1, 1883.

Bees Wintering Well.

I put the bees in the cellar Nov. 29; temperature about 35°; took them out for a flight Feb. 14, all wintering well, except one, which had the dysentery very badly. I removed all their combs and gave them clean ones, and fed sugar, saturated with honey. They are doing well now. Bees consumed very little honey; I used no chaff cushions or quilts; I raised hives about ½ an inch off the bottom board, putting sticks under the corners, and kept the cellar perfectly dark.

R. GRINSELL.
Baden, Mo., Feb. 26, 1883.

Cellars Best for Wintering Bees.

On Dec. 6, 7, 1882, I put 130 colonies in the cellar. I had to pile them 3 high, in order to get them all in. I put 100 on summer stands on Feb. 28, 1883; the other 30 on March 1; all are in fine condition, except one, which had the dysentery some, and had lost about half the bees. If sugar syrup and chaff can beat that, let us hear from them. I still vote in favor of the cellar to winter in, if intelligently done.

J. E. HUNTER.
Wyoming, Iowa, March 3, 1883.

Prospects are Good.

The thermometer registered 65° at sunrise to-day. The bees have been flying lively, after a confinement of 100 days. They began to show signs of dysentery, but all answered to roll call, but one, which starved with 25 lbs. of honey in the hive, because I neglected to give them more bees in the fall. My bees consumed but little honey, and the combs are bright and dry. They were wintered on the summer stands, as I think all bees should. More bees are lost by moving back and forth than in any other way. By shading the entrances, the bees will not fly except when it is warm enough for them to return. Prospects are good for white clover. I shall sow 25 acres of alsike and sweet clover, in wheat, in a few days.

JOHN A. WILLIAMSON.
Lodge, Ill., Feb. 16, 1883.

Packing Bees in Sawdust.

Last autumn I packed 9 colonies, on Mr. James Heddon's plan, and one two-frame nucleus on Mr. D. A. Jones' plan. On Feb. 16, they had a good cleansing flight; they are all strong, so far, with but few dead bees. Even the two-frame nucleus is strong and lively. Last autumn I put two frames, full of honey, one on each side of them, and two division boards on each side. They are in a small space in the hive. I think that packing in sawdust is the best plan to winter bees, for this was a very hard winter. I think that my bees will winter through all right. I made a bridge of Langstroth's portico, for winter passage for the bees. Will it do to leave them packed until May 1?

WM. ROBERTS.
Vaughansville, O., Feb. 17, 1883.

[Yes, sir; keep them packed until just before they need surplus boxes. If thin cloth is over them, exchange this for a solid board cover, or some cloth they cannot gnaw.—J. HEDDON.]

Large Yields—A Correction.

In giving the additional number of pounds for the 192½ sections at the rate of 1½ lbs. for every 20 sections (see page 107), 143¾ lbs. should be 14¾ lbs. (Perhaps 14½ would be nearer right, making the aggregate 399½ lbs. A mistake of the printer.) Another slight mistake occurred in the first column: "On" instead of *in* each cover. The covers are 7 inches high, and we use the inside of the 4 sides of the rims for recording slates. We were pleased to see Mr. Caldwell's remarks on the same subject; he presents it in still a different light, and we desire to add a thought or two Mr. F. overlooked. From the yearly reports of our most successful bee-keepers, Mr. F. will see that these large yields are very rare cases. Besides, the closest attention of the apiarian, the co-operation of the most favorable circumstances is necessary to produce such results. Among the many bee-keepers of the country, there is only now and then one, who obtains such a large yield, enabling him to give one of those so-called "exaggerated reports," and this may be the only one in his life-time. Since 1875 we have kept from 100 to 200 colonies, yearly, and this is the only time that we ever had such a yield or anything near like it; we had several colonies that season, which overrun 300 lbs. considerably; but even that is such an exception that we hardly expect to see it ever repeated. We would gladly give $500, or twice that amount, to any one who could teach us how to always produce such yields, but we know that it is an impossibility, and will be as long as we cannot control nature.

Naples, N. Y. GREINER BROS.

When they Bloom.

Is white clover profitable as a honey plant, the same season, when sown in the spring? Will figwort or motherwort bloom the first season, when planted in spring? How long does it take to bring Rocky Mountain bee plant to a producing state?

Northboro, Iowa. O. E. MOORE.

[If sown early in the spring white clover and motherwort yield honey in the following June, and cleome (Rocky Mountain bee plant) and figwort in the July following.—ED.]

Feeding in Spring.

Let me say to those who want a big yield of honey next season, to try feeding, as soon as bees can fly; if they have too much honey, take some from them and feed sugar syrup. I have tried it, and know the bees will pay back the cost with compound interest. Bees are wintering tolerably well. I have lost 1 out of 44. I expected to lose 3, and perhaps more. They had a good flight, and they needed it, on Jan. 27 and 28, and Feb. 7, 8, and 19; they have plenty of honey. I think they have consumed 15 to 20 lbs. already. I have 1 colony wintering with the hive raised 2 inches around, with coffee sacks on the frames, and they are coming through all right. I have 40 colonies in a dug-out, on a side hill, facing south, and banked up on the north and ends, with dirt, even with the top, and covered over with hay and boards. This winter I am trying cellar and out-door wintering. I think the latter will come out best, since the bees have had a good flight. WM. MALONE.

Oakley, Iowa, Feb. 23, 1883.

Light in Bee Repositories.

In conversation with an acquaintance of mine, a carpenter, who had made bee hives and boxes for his neighbors, he said he was ready to disagree with any bee-keeper that it is necessary to exclude light from cellars or bee houses wherein bees are kept in winter. He claims that it is natural for bees to be surrounded with light, as they are when in trees and hives when standing out of doors. He does not believe it necessary to make cellars and bee houses dark, so far as the light is concerned. If the darkness that is within the bee hive, is all that is necessary for the good of the bees, why not put windows in our bee houses, clamps and cellars, and make them as light as our houses? It might seem that I have read enough to have that question settled, but I do not remember seeing or hearing it explained why the light is objectionable to the inside of the bee house. Pretty much all the reason I can call to mind, is the fact that those places are built without windows, and made as dark as possible. Of course, light attracts bees out, but is it not the temperature of the room which keeps them in the hives? On consulting Cook and Quinby, I see they both say a cellar or house must be made perfectly dark, but do not explain the particular reasons why. If "a little knowledge is a dangerous thing," then it is best for us, inexperienced ones, not to form too positive opinions. Such may be the case with my friend.

Ludlow, Vt. A. P. FLETCHER.

[Mr. Heddon promises us an article on the above subject, which will answer the questions asked.—ED.]

Wood Separators.

Why not make them come the whole width of the section box? Then, if it cannot be done in making the separator, we can take our pocket knives and, with straight edge, trim out a notch in a few minutes, and the whole question of bee glue is solved, especially if you use tight-fitting cases and clamps. C. H. DEANE.

Mortonsville, Ky.

Hives Full of Honey.

I started in, last fall, with 44 colonies; lost three; the rest are mostly very strong; wintered on the summer stands, by turning a box over the hive; nearly every frame is full of honey. Should I extract to give them a chance to breed up? I want to increase early. They commenced to carry in honey and pollen yesterday, March 4. I find my hive is too short: 15¾x11½x10 inches, side measure. Should I change? W. H. PEARSON.

Jarbalo, Kans., March 5, 1883.

[If the frames are full of honey, use the extractor to give the queen room. As you have started in so liberally, it will not pay to change frames.—ED.]

Transferring Bees.

By his, Mr. Heddon's new process, filling the hive with frames of foundation, he tells us that he takes the drum box, approaches the box or queen to be transferred, and proceeds in the ordinary way to smoke, turn the hive "topsy turvy" and draw the bees up. Would it not answer every purpose to place the old gum or box on top of the frame hive and proceed to smoke and draw the bees down on the foundation frames? If the downward process will answer as well as the upward expulsion, a board, to cover the frame hive, could be provided, with a hole 7 or 8 inches in diameter, or larger, cut in it; place the box hive on it, and everything would be very convenient for business.

Highlands, N. C. E. E. EWING.

[The downward expulsion process, is not as good, efficient and speedy as the drum box and upward driving plan, I laid down in "Modern Transferring." Bees hive upwards *much* more readily than downwards.—JAMES HEDDON.]

CORRESPONDENCE

For the American Bee Journal.

Temperature to Make a Cold Winter.

G. M. DOOLITTLE.

On page 111, Mr. Wismer wishes me to say "what the thermometer will record for a mild winter, and what for a cold one." Two years ago the lowest point touched was 22° below zero, and during nearly five months the highest point was only 44° above, which was not warm enough for bees to fly. The average temperature was not far from 18° above zero; such is what I term a cold winter. Last winter (one year ago) the lowest point was 26° below zero, while, every few weeks, the mercury stood at from 48° to 60° above, which gave the bees a chance to fly. The average temperature of last winter was not far from 28° above zero. Although 26° below zero was the coldest of anything we had experienced during the past 13 years, still the winter, on a whole, was what I term a mild one. Occasionally, one or two extremely cold days do not materially injure bees, when it soon warms up, so that they can have a flight and take fresh honey inside the cluster, but five months of steady cold, as low as 18° above zero, is almost sure to work death and ruin for them.

Whilst the 26° below zero, a year ago, did not materially injure the bees, it was of great disadvantage to the apiarist, as it killed the fruit buds, to a large extent, and the continued freezing and thawing destroyed the clover. I have often noticed, here in New York, that our best yields of honey follow a cold winter, during which more or less of our bees perish, which, in fact, compensates for the loss of bees. During the present winter the mercury was down to 15° below zero on the morning of Jan. 10, and has been from 6° to 12° below several times since then. The thermometer showed 11° below on Feb. 23, at 8 p. m.

My bees have had no flight since Nov. 11, and many of them are beginning to badly feel the need of a cleansing flight; others are apparently in as good condition as they were when packed for winter.

The point I desire light on, above all others at the present time, is: How can I secure to *all*, the condition enjoyed by the *few?* All were equal, as far as I could tell last fall, and all were packed alike. Those having bottom ventilation, with none at the top, are in the best condition, so far. I believe there is a difference in bees about wintering; for the bees from a queen, received from Texas last June, were the first to spot their combs; and at this time scarcely a handful of them remains, and they are in a deplorable condition.

I am studying, and experimenting with a view of getting some light on this inequality of different colonies regarding wintering, hoping that I may gain some knowledge of the matter before my bees have to pass through another cold winter.

Borodino, N. Y., March 1, 1883.

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For the American Bee Journal.

Pure and Dollar Queens.

JACOB SPENCE.

Intensely interesting have been the discussions carried on in the BEE JOURNAL on the many questions as to the various methods of apiary management. Particularly notable are the conflicting ideas entertained by even the wise and experienced breeders, on the virtues and comparative merits of the several bee races and crosses, with a view to producing the "coming bee."

The object of present reference to these various presentations of opinion is particularly to call attention to a point or two which others, no doubt, as well as myself, may have noticed, which these authorities appear to have overlooked or do not seem to have taken sufficiently into consideration.

First, Definitely to set forth what is to be squarely understood by the term "pure?" In fact, to some who have also paid attention to the subject, this idea of a "pure strain" seems not a very "pure and simple" idea—how far back pure? and then—where is the purity start to be discovered? The further back genealogy is traced, assuredly, the more *mixed* it looks. Every queen, as well as every (human or bee) subject, is reported as having two grandmothers, and, similar count, grandsires, and then every remove back, once more doubles the number, say, 4 *great*-grandmothers and 8 *great-great*, etc.,—so that by the time we reach six generations (which some report as accomplished in one season) it is plain that we repeat *great* only four times we have, by correct geometrical progression, 64 female, and, no doubt, as many more male progenitors, of our last queen only a few months since! (and another generation back 128, etc.,) now, *pure*—from which?

I confess, also, to some serious apprehension in the matter of breeding certain peculiar good and valuable characteristics, and, at the same time, that of the undesirable traits of the race, while retaining those desirable. This really looks like a rather up-hill undertaking.

Most physiologists would be likely to, at least, hesitate about guarantee against the cropping out, too, of some of the bad pranks of some of the great grand-parents, in the coming generations.

Most emphatically, however, am I in favor of shrewd, best-devised effort to breed in all practicable perfection. Taking advantage of "survival of the fittest," as well as all advanced appliances for controling the provisions for propagation. "Natural" (and artificial) "selection," utilizing and guiding what is called instinct, much, doubtless, may be turned by skill to valuable account, and very deserving of high commendation indeed are the assiduous efforts of our much esteemed, progressive queen-breeders. Yet may one respectfully presume that some of these may not be entirely beyond taking in good part a respectful suggestion in the line that they do not try to have themselves and all others accept as true, in this particular line, that "all things are possible to him that believeth" in himself.

I rather fear that the (so-called) "fixed type" will need fixing all the time. To me, pure stock, in this case, would mean very much akin to "in-and-in" breeding, and, for one, I do not want such purity. A queen, from percentage of good results, I would, indeed, like; hoping, too, that she may have exercised good taste in the selection of her royal mate. It may fairly be hoped that many of the good qualities, so very desirable, are likely to be largely secured by exercise of good taste and mature judgment of experienced apiarists, and, if by extra application, ability and skill, a strain can be produced so vastly improved as to be worth a fancy price, no one need be disposed to complain. However, accepting as true what is asserted by breeders of high reputation, "that dollar queens are reared, under proper conditions, from the most approved parentage," then I feel like taking such, when I need, thankful to the decent vender who CAN do, and honorably does all he promises; so am I disposed to vote dollar queens a boon to bee-keepers.

Toronto, Canada.

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For the American Bee Journal.

Obtaining Queen-Cells for Nuclei.

P. L. VIALLON.

When the time comes, in spring, to start my queen-cells for queen-rearing, I pick out, in my queen-rearing apiary, the necessary number (according to the number of nuclei) of the strongest colonies, and mark them from No. 1, up. On the first day that I wish to start cells, I take out all the unsealed brood from No. 1 and give it to No. 5, or distribute it among those in which it will do the most good. The queen of this No. 1 is either caged, for further use, or used where required. In 5 days, when all the queen-cells are capped over, I take the frame of queen-cells out, and put it in a strong colony, to take care of the cells until they are due for the nuclei, which I rendered queenless and broodless, and mark it No. 1 A. I mark this differently, as it will take care of the cells of 5 others. I give No. 1 the queen and all the brood of No. 5, which is the one I have to start cells on that (the 5th) day. On the second day I take all the brood of No. 2 and give it to No. 6, or distribute it, as I did with that of No. 1, and, in 5 days, I give the queen-cells to No. 1 A, to take care of, and give this No. 2 the brood and queen of No. 6, and so on, with No. 3, 4, 5, etc.

Therefore, we see, that when we reach No. 5, on the fifth day after starting cells in No. 1, we give its brood and queen to No. 1, from which we have just taken out the queen-cells. No. 2 received the brood and queen of No. 6; No. 3 that of No. 7, and so on, as we proceed giving the brood of the one we start cells in to the one from which we take the cells. When I reach No. 11 I render another colony queenless and broodless, to take care of cells, until they are due, that is for 10 days, as No. 1 did, which I mark No. 2 A. I give No. 1 A the queen and the brood of No. 2 A. By this method my colonies building cells are queenless only 5 days, and as they receive the brood of another, they are kept in good condition. Of all the colonies I used, this season (1882), for queen-cells, I have extracted an average of 75 lbs. of honey, and besides, got all the brood needed for keeping up my 4 and 5 frame nuclei, and they are, at this date, as strong as any colony in the yard.

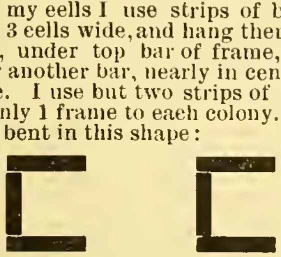
This is a system of rotation, which may appear complicated, but when practised, takes less time and is more satisfactory than the system previously adopted.

So as to make it easy, I keep a record in a book, as follows:

No. of Colony.	Date brood is given for cells.	Date cells must be removed to colonies taking care of cells.	No. of Colony taking care of cells.	Date cells are due for nuclei.
1..	April 1	April 5	No. 1A	April 10
2..	2	6	"	11
3..	3	7	"	12
4..	4	8	"	13
5..	5	9	"	14
..	6	10	"	15
..	7	11	"	16
8..	8	12	"	17
9..	9	13	"	18
10..	10	14	"	19
11..	11	15	No. 2A	20
12..	12	16	"	21

Instead of marking the month as in above, I use only cyphers; for instance, I put it in my book 4-1 for April 1st, etc.

For my cells I use strips of brood, about 3 cells wide, and hang them cell down, under top bar of frame, and, under another bar, nearly in center of frame. I use but two strips of brood and only 1 frame to each colony. I use wires bent in this shape:



to hold my strips to the bars, so that a branch of it rests on top of bar and the other penetrates just under septum of strips of comb. I always use brood one or two days old for my cells, never eggs, for reasons that all practical bee-keepers know.

The above is given for 1 colony a day, but the same method is followed for more. I use 2 a day to supply 250 nuclei with cells.

The above is about the substance of an essay read at the National Convention, Cincinnati, which mysteriously disappeared after it was read.

Bayou Goula, La.

For the American Bee Journal.

How Shall We Report?

JAMES HEDDON.

This subject is interesting and important, and moves directly upon the interests of honey-producers. I wish to touch it, in a little different manner, from that upon which it has yet been treated. I wish to consider it a little more in the abstract. Nearly all have assiduously labored to point out to us the rights and wrongs of counting extracted for comb honey, or saying "honey" without telling which kind, or weighing up wood and glass, or piling 5 colonies into 1, or 1 into 5, all of which admonitions are in place and to the point. That is right, when we speak, let us speak the exact truth, not only in the letter, but in the spirit. Since we have come to the consideration of the truth in the spirit, does it not call to our mind an old and wise adage, that, "even the truth should not be told at all times." I think Prof. Cook once fully appreciated the force of this adage.

A few years ago, the Professor, in company with the Michigan State Treasurer, and plenty of good help and advice, I doubt not, secured an extraordinary large yield from 1 colony of bees. This being a "truth," immediate report was the next step. This report was an effect of the cause, extraordinary yield. This effect, like all other effects, in its turn became a cause, and like all other causes, produced its effects, which were as follows: Various patent hive venders throughout the country incorporated this report *verbatim* into their benighted or humbug circulars, the effects of which were to deceive and rob avaricious and ignorant farmers who owned "skeps" of bees.

Its effects, as published elsewhere, like that of other large reports, was to entice many who could not succeed at anything else, into the profitable business of honey-producing.

We know how prone is human nature, especially those who are out of a job, and just those that we do not want, and who, for their own sake, ought not to attempt our business, to kindly "take" to "big things," readily donning the possibilities of genius, as the probabilities of their own sweet selves.

Suppose one of our ablest producers was seeking a location in which to practice his favorite calling, how much notice would he take from a big report from one hive, once occurring in that locality? Would he not ask, what has been the average yield from a whole apiary during a series of years? "Chaff does not catch old birds."

What can be the object in sending in these big reports, no matter whether false or true? If their authors have carefully obeyed the eleventh commandment, viz.: "Thou shalt not be found out?" the effect is the same all around. I can conceive an answer to my question. The enthusiastic beginner, when struck with the semi-occasional honey shower, becomes unexpectedly and unaccountably possessed of a large surplus yield from his most favorably situated colony (why most favorably situated, he does not know), and his young enthusiasm fills him too full for containance, and out comes the report. As we have some bee-keepers, whose eminence sprang from reports of large surplus, is another cause for sending in the report, and these desires thoroughly test the integrity of the reporter, which, if found wanting in the least, has a tendency to stretch the already large yield to enormous proportions, weighing up wood, glass, tin points, etc., and, possibly, direct crookedness gets into the figuring.

It is a great error to immortalize a bee-keeper for a few large reports, especially from a few colonies. Continued authoritative reports of this kind are quite another thing, especially if made out by second parties. Such catering is not only unwise in the caterers, but tempting to honorable aspirations.

I do not honor the natural philosopher who attempts to astonish me with his new theories of gravitation, based upon his assertions that he threw up a brick and it is still going up, but I honor the Kepler who proves his theories to my reason, by his discovered philosophy; or the Spencer, who proves his social philosophy by the genius of his mighty brain, who never asks you to take his word for any thing, but proves his theories by recalling your attention in a philosophical manner to what you already know.

Let us give in the reports of our successes and failures, in the aggregate or extreme, only when we have the self-consciousness that the effects of our reports will do justice to all.

Dowagiac, Mich., March 3, 1883.

For the American Bee Journal.

Keystone Bee-Keepers' Association.

The bee-keepers of this portion of Pennsylvania are still at work. On the 23d day of November last, pursuant to a call, a few bee-keepers residing in the counties surrounding Lackawanna, met at the city of Scranton, and organized the "Keystone Bee-Keepers' Association," adopted a constitution and by-laws, and elected the following officers for the ensuing year, viz.: President, J. W. Fisher, Drinkers; Vice-President, W. H. Hull, Olyphant; Secretary, Geo. C. Green, Factoryville; Treasurer, Justice Akerley, Justice; and Assistant Secretary, Geo. H. Colvin, Dalton.

After transacting the necessary business, and selecting questions for consideration at the next meeting, the Association adjourned to meet at the same place Jan. 11, 1883.

At this meeting several questions of importance to bee-keepers were discussed, and other questions selected for consideration. Several new members were admitted; the present number being 26. The admission fee is 50c; ladies free. The next annual meeting will be held in Scranton, on Tuesday, May 8, 1883. The questions selected for consideration, were: "The Production and Care of Surplus Honey; "The Best Method of Wintering Bees," and "Rearing Queens."

Mr. Geo. Wright was selected to read an essay on "Bee-Keeping."

G. C. GREEN, *Sec.*

Factoryville, Pa., Feb. 20, 1883.

For the American Bee Journal.

Bee Dysentery Not a New Disease.

S. F. NEWMAN.

In the BEE JOURNAL for Feb. 14, page 95, Mr. Heddon says "he would like to tell S. F. Newman why one of his apiaries has dysentery while the other three have not, all being prepared for winter in the same manner."

Now, Mr. Editor, there are many bee-keepers in Northern Ohio who will be under very many obligations to Mr. Heddon if he will give the desired information, especially if the cause is of such a nature as to be capable of being guarded against in the future, for dysentery is making sad havoc with many apiaries in this section.

I neglected to say in my letter, which appeared on page 26 of the JOURNAL, that our 38 colonies, which have been the worst afflicted, and the most of which have gone where sick bees go, were the strongest, and to all appearance, in the best condition of any we had to withstand a hard winter. Most of them had young queens, and all had brood in from two to five combs as late as the last of October.

I had supposed that dysentery was comparatively a late disease, but I find, in reading one of Virgil's poems, that he had a knowledge of it, and prescribed remedies. I send you the translation of part of the poem. Virgil says:

"But since life has on bees, too, entailed our misfortunes, if their bodies shall languish with a sore disease, which you may know by undoubted signs; immediately the sick change color, a horrid leanness deforms the countenance; then they carry the bodies of the dead out of their houses, and lead the mournful funeral processions, or clinging together by their feet, hang about the entrance, or loiter all within their houses shut up, both listless through famine, and benumbed with cold.

"Then a hoarse sound is heard, and in drawling hums they buzz, and at times the south wind murmurs through the woods, as the ruffled seas creak hoarsely with refluent waves—as rapid fire in the pent furnace roars. In this case I would advise to burn gummy odors, and to put honey in, through pipes of reed, kindly inviting and tempting the feeble to their known repast.

"It will be of service to mix with it, the juice of pounded galls and dried roses, or inspissated must, thickened over a strong fire, or raisins from the Prythian vine, Cecropian thyme and strong smelling centaury. There is also in meadows a flower to which the husbandman has given the name amellus, an herb easy to be found; for from one root it shoots a vast luxuriance of stalks, itself of golden hue, but on the leaves, which are spread thickly around, the purple of the dark violet sheds a gloss.

"The altars of the gods are often decked with plaited wreaths of this flower. Its taste is bitterish in the mouth. The shepherds gather it in new-shorn valleys, and near the winding streams of Mella. Boil the roots thereof in fragrant wine, and present it as food for the bees in full baskets at their door."

Norwalk, O., Feb. 17, 1883.

For the American Bee Journal.

How to Make Honey Vinegar.

W. Z. HUTCHINSON.

At the Michigan State Convention at Kalamazoo, Mr. Bingham had on exhibition an excellent sample of honey vinegar; and, as he told us how many pounds of beeswax was obtained from a certain amount of washed cappings, it occurred to me that the vinegar was made from the honey that was washed from the cappings. Upon addressing a letter of inquiry to Mr. Bingham, he wrote me a long, kind and instructive letter upon the subject, which, with his permission, I now give to the readers of the BEE JOURNAL. It is as follows:

"The cappings should be put into a dripper and allowed to remain about 24 hours, then put into as much water as you may reasonably expect to sweeten a little sweeter than good new cider, with the cappings that you expect to have. I fill an ordinary whisky-barrel with water, and the honey from the cappings, in extracting 1,000 pounds of honey, usually makes it sweet enough. The cappings are left in the water an hour or two, then skimmed out and put into a strainer to drip dry, which they will do in 10 or 12 hours. The drippings are, of course, saved and put into the barrel.

"This slightly sweetened water soon begins to 'work,' and the scum may be taken off with a wire cloth, or other skimmer, as often as necessary, until nothing rises. This sweetened water passes through all the stages of fermentation, the same as cider, until it reaches the point called vinegar. One year, perhaps less, makes it such vinegar as you saw at Kalamazoo. We have used no other vinegar in our family for 20 years, except a year or two when we first came to Michigan, 14 years ago, when I had no bees.

"There is, probably, no profit in making honey vinegar from good salable honey, but in keeping bees there is often waste honey that is of little value. I know of no manner of getting cappings ready for making into wax that is so convenient and profitable, and the vinegar is known to be pure.

"I keep the barrel covered with a cotton cloth, and there is not much danger of getting the water too sweet. If very sweet, it takes longer to get it to vinegar; but it is better when it does get there. T. F. BINGHAM."

A barrel of excellent vinegar for every 1,000 pounds of honey extracted is certainly worth saving. I know of one bee-keeper who will save that barrel of vinegar, during the coming season.

Rogersville, Mich.

For the American Bee Journal.

N. E. O. and N. W. Pa. Convention.

D. VIDETO.

Our trip to the North-Eastern Ohio and North-Western Pennsylvania Bee-Keepers' Convention, held at Andover, O., on Feb. 14-15, was very agreeable, for many reasons.

Programmes, covering the whole ground of bee science, were printed, and circulated through the audience, and, judging from the attention and interest manifested, those present had a desire to know more about bees. When a topic was announced by the President, there was no want of debaters. Among the 60 or 70 present (including some ladies), short and pithy speeches sprang up everywhere.

With all the slashing the dollar-queen breeders took, and the advertisers of new-idea hives, new fixtures and half-pound sections without separators, and wide frames in the brood chamber for surplus, and the Given press, to fasten foundation on wired frames, etc., etc., there was the utmost kindness and good feeling, and earnest desire to compare notes and learn more about the modern apiary.

Pet theories and pet practices were alike criticized, and, while all enjoyed the feast, I am confident that many unlearned, and learned anew to profit by closer study and practice.

The first day was rainy, but, on the second, the storm cloud passed over, and the members of the convention were invited to visit the very attractive apiary of Mr. M. E. Mason, where, to the delight of all, a portion of his bees were making their first cleansing flight. Mr. M. has been using the Root chaff hive, in part, but says he will make no more, although he considers them tolerably good for wintering; the objections being that they are too cumbersome for summer manipulation. The rest of the hives are the Simplicity, packed in chaff; the outer box is made of pine and painted, with tin roof and tight bottom. Chaff cushions are placed directly on the brood frames, also filling the spaces outside of the division boards. Examination showed them to be in excellent condition and it was thought by many that they could endure another month's confinement. One very important feature in Mr. Mason's packing, is, that the hive sets into the box, with about four inches of chaff under the hive. The bee stand is about six or eight inches high, and so made as to give little or no moisture to the packing box. Mr. M. has over sixty colonies, nearly all of which are pure Italians, reared from imported queens. He says the highest type of the Italian bee is not found in the imported or foreign bred, but that when American born and accustomed to our climate, they exhibit all the desirable qualifications. It is but just to say that he has some splendid bees. This section of country seems admirably adapted to the bee industry. Andover is situated 28 miles south of Ashtabula, on a branch of the Lake Shore Railroad. The country is moderately rolling, largely timbered with hickory, maple, ash and basswood; the soil is heavy and adapted to grazing, with a liberal scattering of white clover.

Mr. M. contemplates moving about one-half of his bees, in the spring, six miles away, to a piece of timber, comprising 600 acres, a large portion of which abounds in basswood.

The time of our meeting sped hurriedly by, and, before our programme was completed, the trains admonished us that we must kick the dust from our feet and depart, and, as Providence would have it, I arrived home on the morning of the 16th, to witness my bees, as they had an all-day, cleansing flight. Examinations, one week previous, had shown my bees to be somewhat uneasy, with abdomens extended and symptoms of dysentery about the entrances, with occasional spots on the combs. The warm day of the 16th was a God-send to my pets.

North-East, Pa.

For the American Bee Journal.

Section Racks for Comb Honey.

T. E. TURNER.

This is a subject of much importance, at the present time, to many bee-keepers, and especially to those who contemplate changing from broad frames to some other arrangement for holding sections in place, until they are filled with honey.

There are serious objections to broad frames as section holders. It is with difficulty that the sections, when filled, are removed from them, for the bees fasten them with propolis. The bees often stick propolis on the edges of the sections in broad frames that must be scraped off in order to fit them in the shipping case. When an upper story or surplus hive is filled with broad frames and sections full of honey, it is hard to take them out without spoiling some of the sections; unless a movable side is used in the upper story, which adds to the expense. That it is easier to make objections to that which is in use, than to propose something better to take its place, is sometimes true, but not in the present case, as viewed by the writer. At the Northwestern Convention, some were desirous of changing from broad frames as supers, if they only knew of something to use that was better. It is important for all who are beginning bee-keeping, as well as for those who contemplate changing from broad frames to section racks, to know which is the best to use, for changing racks, after commencing their use, is costly.

I have used broad frames in upper stories, and at the sides of the brood chamber and section racks, in the same apiary for some years, and I consider the racks about as far superior to broad frames as frame hives are to box hives. I have no interest in the manufacture or sale of any rack, for I purchase my apiarian supplies ready-made, but the Hodgson Rack, that was illustrated and described on page 96 of the BEE JOURNAL, for Feb. 14, has been used by the bee-keepers in this locality for four years, and possesses practical merit. As it is public property, any one can make it who desires to do so. This rack is regarded by those who have used it here, less objectionable than an upper-story super, with broad frames, but perhaps some of the greater lights in the bee world will find objections to it, that we lesser lights have not discovered. It does not need to be turned bottom side up, and the sections knocked out, with a jar, as with some others, but by removing the V-shaped beveled wedges and the sides, any or all of the sections can be removed without jarring or danger of breaking the combs. The expense of making it is about the same as half-story super, with 7 broad frames. The observing glass allows the sections to be seen when on the hive, without disturbing the bees, but it can be made with less cost without glass, if desired; and it will admit of tiering up. There is a little board to shut off the bees from a part of the section space to concentrate the bees on partially filled sections, in case the honey flow slackens up. It can be used on top for chaff-packing, just as well as any other, if desired, and has no cross pieces to interfere with packing. With it there is no need of separators. I have used separators on broad frames, but none on the rack, and the sections are about as straight for packing in shipping cases in the one as in the other. Separators can be used with it, if desired.

If this imperfect description of section racks will aid some progressive apiarist to greater success in his "sweet pursuit," my object will be accomplished.

Sussex, Wis.

For the American Bee Journal.

The Adoption of a Standard Frame.

H. D. EDWARDS.

On page 21 of the BEE JOURNAL, for Jan. 10, is an article by J. B. Mason, advocating the adoption of a standard frame. The writer does not tell us why we should throw away our present frames and adopt one of a different size. The advantages he omitted to state; they are so few, and the difficulties so many, that the day is *very* distant when we shall see the same sized frame used by all the bee-keepers of the country. The inconvenience occasioned by the different sized frames, is easily overcome, by transferring to the one you are using. He admits that some of our most successful bee-keepers are using different sized frames, according to his particular notions of the size and shape required; and as it has not been demonstrated that a frame of any particular size is any better than a frame of some other size, it will be very difficult to get men to discard the frame and hive they are using for one of a different size, thereby incurring an outlay of time and money, for which they are to receive no adequate return. Locality, the manner of wintering bees, and the production of comb or extracted honey, will always have an influence in determining the size and shape of the frame used. In the extreme Northern States, where bees are wintered on their summer stands, it is generally conceded that a deep frame is best; while a shallow frame, having the advantages for the production of comb honey, is the one most likely to be adopted in the South, where there is no danger from cold in wintering. In the intermediate latitudes, where bees are usually wintered on the summer stands, a frame of medium depth is the one most likely to be selected, as combining more advantages than any other.

I think it a good subject for discussion, in conventions, as it may bring out facts, and help to suggest a frame best adapted to the locality in which members of the convention reside; thereby assisting those who have as yet but few colonies, and those about to engage in the business who are undecided, what frame to adopt.

Delhi, Ill.

For the American Bee Journal.

The Enemies of Bees.

F. THIAVILLE.

In the summer of 1878, when bees were working on mint, cotton and other low brushes, the bee killers were as numerous as the bees, playing destruction. They were also thick in the apiary. I tried to chase them with my net, but with little success.

In this latitude, from the first of May to the middle of June, is the time they are mating; they make a shrill noise and can be heard at 30 paces. Then go around fence corners, and you find them, male and female, hanging to some low bushes, such as sumac and blackberries. They can be caught easily with the hand, and killed. If too high, have your mosquito net and catch them. One day, hunting, in mating time, is sufficient for me, and I am no more troubled with them. We have here 4 varieties, but the most ferocious are the large, black ones, which also catch grasshoppers and other bee killers, in the same manner that they catch bees.

King birds, ants and toads, are little trouble; spiders are more destructive here. Lizards, snakes and scorpions are always hovering about the hives. I have the apiary nice and clean, and keep a good supply of cats and kittens; they catch and eat them. Sometimes scorpions will make cats sick, and, occasionally, kill them.

The bee moth is very troublesome, and puts the bee-keepers on the lookout, to keep only strong colonies. My bees are mostly hybrids and brown bees; they will not suffer by the moth. I have no pure Italians. Suppose the disease, foul brood, makes its appearance in a country where there is a quantity of wild bees in the forests and rocks, apiarists never will be able to clear their apiaries of it. The bees will constantly bring it back from the forest. I believe the bee moth would be a good agent for destroying these diseased colonies and put an end to it. In a warm climate there is more vermin than in a northern country. We have no winter to kill them.

Bees are doing well for this latitude. Now is the time they make active preparation. Sometimes bees gather considerable honey in March, but April is the general honey harvest here.

Forest City, Ark., Feb. 10, 1883.

For the American Bee Journal.

Preparing Bees for Winter.

H. M. MORRIS.

I cannot say that my bees are wintering extra well. Part of them, at least, seem to be a little "uneasy," crawling out at the entrance when it is too cold for them to fly; most of them get back, however, but they look a little too fat to suit me. They are all packed alike, or nearly so; some have the oil cloths directly over the bees. I have tried some colonies that way, for several winters, and I am convinced that it is a poor plan. This is the way I pack: I put about 6 corn cobs, equally spaced, on the frames, to hold up the quilt so that the bees can pass from one frame to another. I used the cobs long before "Hill's Device" was spoken of, and now I find them preferable to punching holes in the combs, and less expensive than "Hill's Device," and you do not have to store them away through the summer, which is quite an item when you have one or two hundred colonies. Then, over these cobs, I place a good thick quilt, blanket, or old piece of carpet; no oil cloth. Then either loose chaff or a cushion. The object is to have something on top that will take up all the moisture that arises from the bees, and, by the way, I do not call chaff cushions, on top, "upward ventilation." A good thick cushion, that fits the hive so tight that you must crowd to get it in, shuts off "upward ventilation," and that is just what we want. To my mind, upward ventilation is a term synonymous with "Blasted Hopes." Of course, I am speaking now of wintering on summer stands. I say never use an oil cloth next to the bees in winter time. It is too cold; it condenses the breath and makes water form directly over the cluster, and in the end, damp hives, moldy combs and dysenteric bees. What is the good of an absorbent over the bees with an air-tight, water-tight partition between it and the bees? It defeats the one object we are working for. Mr. Doolittle should try it on himself some cold night; crawl under an oil cloth sheet, and you may put all the quilts you like over you, and you will find yourself wet and uncomfortable, and (unless extra well covered) cold. That fact can be demonstrated by wearing "rubber boots" for any length of time in cold, dry weather. Your feet soon get the dysentery or something else, and you will have a case of spring dwindling that you will remember.

I have wintered from 10 to 50 colonies of bees on the summer stands, in Simplicity hives, through 5 winters, without loss by dysentery or dwindling, and this is my way of fixing them: I crowd them into 7 frames. I know that they have honey enough to last until unpacked in the spring, a thin cushion on either side, then fixed on top as I have described; entrance closed to within an inch; back end of hive 4 inches the highest, so that no water can run in, but all that might gather can run out. Examine each entrance often enough to know that it is not clogged with debris, and if not north of 41°, your bees will come through the winter all right, in nine cases out of ten.

This is the most severe winter we have had since I have paid any particular attention to bee-keeping, and I may lose some; the mercury going to 18° and 20° below. It commenced, last night, with a thunder storm, and we are still having one of the worst ice storms I ever witnessed. Trees look like liberty poles, completely stripped of their limbs. A white birch tree, some 20 feet high, in front of the window where I sit, is bent with its weight of ice, so that its top lies on the ground. Fields are one vast lake of ice; telegraph wires broken down; everything out of doors is grandly beautiful, majestic to look upon, and the damages are also majestic. As I sit here writing I can hear the branches crack and come crashing down to the ground.

Dr. Miller will find my report for 1882 in December *Gleanings*, page 600. N. H. Stewart quotes me, from *Gleanings*, a little wrong. I said: I think bees gather some honey, each year, from corn; his statement is that my bees gather large quantities of corn honey each year. I am not positive of that. I know that they did this year. Corn honey has such a peculiar quality that if one ever gets a yield he will be apt to know it if he ever gets another, and I am quite sure I have had corn honey before.

Rantoul, Ill., Feb. 2, 1883.

For the American Bee Journal.

Marshall County, Iowa, Convention.

The Marshall County, Iowa, Bee-Keepers' Association met in Marshalltown, Iowa, at 1 p. m., on Jan. 6. The minutes of the previous meeting were read and approved. The subject of wintering was then discussed.

Mr. J. Moore stated that his bees wintered in his cellar, prepared on purpose for them. It is dark, and ventilated by flues starting in the cellar. He lost heavily, 2 years ago, but thinks mostly by his own neglect in not keeping the entrances open. He now keeps the entrances open the full width.

President Barrows said he lost none 2 years ago. Does not darken his cellar; the hives face the wall; flues start from cellar, and when the weather permits he opens doors and windows for ventilation. If cellars are kept near freezing point, they will keep more quiet, and not be liable to come out, if the cellar is a little light.

The secretary read an article from the BEE JOURNAL by G. M. Doolittle, on "Winter Flights."

Mr. Moore said he preferred wintering in the cellar, but should try outdoor wintering, by giving protection, if his numbers still increased. He now has 50 colonies in good condition. All present were much interested, and reported extra returns for the past season, and bees in fine condition for the winter.

The next quarterly meeting will be held on Saturday, March 24, at 10:30 a. m., at the Sheriff's office, Marshalltown, Iowa. Subject for discussion: "Spring and Summer Care." We hope many Iowa bee-keepers will attend the next meeting.

J. W. SANDERS, *Sec.*
O. B. BARROWS, *Pres.*

For the American Bee Journal.

Do Bees Need a Winter Flight?

FAYETTE LEE.

I have kept bees for 6 years, and have let them have 2 flights between January and April, with good results, for the first 3 winters. Every colony coming through in good condition; but during the last 3, they had the dysentery from dampness, and the winter flight did no good. It caused them to try to dry the hive, by sipping up the water that had accumulated on the combs, and in a few days they were worse than ever. I believe that dampness and breeding causes dysentery. About Jan. 28, I went into my cellar and heard a colony making a fuss about something; I raised the cover and looked into the hive; it was full of bees from top to bottom, and the water stood in big drops on the under side of the cover. I took them out and gave them a flight; they had 4 frames of brood. I put them back into the cellar, and before April 15, they were all dead, with plenty of honey. When I put my bees into the cellar, I put a newspaper on top of every hive, to make them air-tight at the top. I learned a lesson, to never stop upward ventilation, because some one said so. The temperature of the cellar was 50° most all winter; bees commenced breeding the last week in January, and made bad work of it. This winter, my cellar stands from 36° to 40°; bees are quiet, and there are no dead bees on the bottom of the cellar. I shall give them no flight this winter. We have had steady cold weather since New Year's day, with some days as cold as 32° below zero, with the worst blizzards I ever saw. Last winter I took up a dust pan full of bees from the cellar bottom and put them beside the stove, and most of them came to life. That shows me they do not die with old age. One spring, when I put my bees out, I found one colony of Italians that had no brood; the combs were dry and the bees healthy, and I never saw a colony do better, through the summer.

The best cover to put over bees in the cellar, is half-inch basswood, just large enough to cover the hive; it will warp just enough to give good ventilation, and it will take up the dampness. A new cellar is a poor place to winter bees in, unless it has a large ventilator running to the roof. The Syrian bees suit me best for extracted honey, the blacks for comb honey, and the Italians for business. I had one colony of Italians that put all of their honey in the upper story, so I had to feed them in the fall. Honey sells at from 15 to 25 cents per pound here.

Cokato, Minn.

For the American Bee Journal.

My Experience With Sweet Clover.

JOHN H. MARTIN.

Several weeks ago, Dr. Miller requested me (by postal card) to give my experience in the sowing of sweet clover, referring to my article upon bee farming, on page 308, BEE JOURNAL for 1881. It is very easy for us to give our plans and directions for sowing or planting our crops, but the result, at the close of the season, is sometimes a heart-sick task.

My experience, then, with sweet clover, is this: About 5 miles from my apiary the roadside is full of sweet clover. In the fall of 1880 I gathered enough seed to sow an acre. It was sown upon gravelly loam. As the books all say sweet clover will grow anywhere, even upon a rock, I did not spend much time in preparing the land by manuring, but gave it a thorough harrowing. At the proper time for plants to be coming forth, you would have frequently seen a beekeeper about my size prospecting that acre of ground for sweet clover. I prospected, from time to time, during the whole season, and at harvest time I could have easily carried the crop, honey, blossoms, fodder and roots, all in one hand; it was a complete failure. A portion of the land was quite rich and moist; upon this a few diminutive straggling plants put in an appearance.

I have the same experience in sowing upon the roadside. It will not catch permanently. If, now and then, a plant does mature and casts its seeds, you will find none there the next season. The species of clover I have experimented with is *an annual*. It seems to thrive best upon clay soil. I hope to give it another trial upon a field of clay with plenty of manure, another season. The idea that, because it grows upon the roadside, it is growing upon poor land is a mistaken one. Our highways, and especially all of the land between the fences here in the Eastern States, is the richest land we have. The scrapings in the hollows and ditches is nearly equal to barnyard manure. There is evidently great value in sweet clover blossoms, for during the past season, when our apiary was yielding no honey, those having bees within reach of sweet clover received much benefit from that source. The question with me is, how to sow it, so as to have a good reliable growth. I have thus far followed nature's plan, have sown in the fall, perhaps I should sow in the spring.

I find the Simpson honey plant, or figwort also, hard to start from the seed, but this objection can be overcome, by starting plants in a hot bed, and transplanting them. By this method, a rapid and successful growth is secured, and although I have had but a few plants in my yard, I think it the best plant, exclusively for honey, I have yet seen. It comes to maturity the second year, and our plants were fully 10 feet in height, and had half a dozen or more stalks, all full of blossoms; and the beauty of this plant is the seemingly unceasing flow of honey. The bees were at work upon it in myriads, from early morn until dewy evening, in rainy weather or in time of drouth. It was the "old faithful," among our honey plants. I hope to set an acre of this plant this spring. I also consider alsike clover a bonanza for the bee-keeper, even if he owns not an acre of land, his farming neighbors can be induced to sow it for their stock.

Hartford, N. Y.

[This is about the only failure in propagating sweet clover, we remember of seeing recorded, and we fully believe that there is some mistake about it—either the seed was poor, the land too rich, or some climatic difficulty prevented its development. It is best adapted for poor clay, but will certainly grow and thrive in some good land, as we have proved, year after year. Probably the key to this failure is found in the *third* paragraph, where Mr. Martin says: "The species of clover I have experimented with is an *annual*." *Melilotus alba* (sweet clover) is a biennial, and not an annual, and hence it *must have been another plant entirely*.—ED.]

For the American Bee Journal.

Are Sections Under 1 lb. Profitable?

F. I. SAGE.

I notice by the BEE JOURNAL that the impression seems to be gaining ground among bee-keepers that it is more desirable and profitable to have comb honey put in half-pound packages. Having bought of the producers, during the past season, upwards of 50 tons of comb honey, perhaps they may think my views on the subject worthy of notice. Permit me to say (and most emphatically) that I am not in favor of using the half-pound sections, and never advocated the using of them so small as one-pound. Certainly, we want nothing smaller than the pounds. It may be said that I am selfish in this matter, and I admit I am to this extent, viz.: That I believe I can sell more pounds or tons of honey by handling nothing smaller than 1½ or 2-pound sections, than I can if handling 1 or ½ pounds.

What is for my interest, I think is also for for the interest of the producer, and the merchants with whom I deal. To illustrate: A buys 5 cases of honey, in 2 pound sections; to sell this, he makes 60 sales; B buys 5 cases, containing 24 one-pound sections; he must make 120 sales; C buys 5 cases, containing 240 half-pounds, and, of course, must make 240 sales. Which one, do you think, will first sell his stock of honey? Having tested the matter thoroughly, I know the 60 two-pound sections will be sold long before the 240 half-pounds. I know it is said the pounds and half-pounds will be sold to many who would not buy the larger size, but you must remember that there are many who would buy the pounds who would just as soon take the two-pounds, if nothing smaller was at hand. I deal with many who will not buy so small as the one-pound package of honey, and would laugh at the half-pounds, considering them only as novelties. They would say, at once, when the honey trade comes to this, we want no more of it. Suppose I handle 50 tons yearly of two-pound packages; 40 tons of one-pounds, or 30 tons of half-pounds would supply this same trade. This, I firmly believe. It is said Boston pays 5 cents per pound more for half-pound sections. For the sake of the argument, we will admit she has, for a very limited quantity, but why did she do it? Simply because it was a novelty! I happen to know that Boston has been offered half-pound sections for much less than quotations, but she would not buy them for cash, at such prices.

If it is for the interest of the merchants, and for mine, to handle nothing smaller than 1½ or 2-pound sections, is it not also for the interest of the bee-keeper to use sections of that size, and not strive to cut his own throat by coming down to the "penny-package?" Of course, if he understands his business, he knows he cannot produce a given weight of honey in penny packages for the same price, per pound, that he can in 1½ or 2-pound sections. If he feels as though he was getting rich too fast, and his conscience troubles him much, let him sell his large packages for the same amount of money that his honey crop would have brought him, had it been in half-pound sections. Let me illustrate how this penny package business works: I have a trade that has never, until recently, used anything smaller than two-pound sections; along comes a man who has one-pound sections; they look nice, are a novelty, and a little persuasion on the part of the seller, induces the merchant to try a case, which takes the place of 2 cases of two-pound sections. Next season along comes the half-pound sections, and he again buys, which again reduces his sales, but the worst of it is, that after these small packages have been introduced, the people seem to think they want them, and if they cannot get them, quite likely they will take none, and the merchant begins to think the honey trade is scarcely worth bothering with. In fact, I know of a number who have given the honey trade the "go by" altogether, during the present season.

Again (you may laugh at the idea, nevertheless it is a fact), that there are thousands of otherwise intelligent people, who firmly believe that all these small nice cakes of honey are manufactured by man, and will not believe that bees can be trained to do such work. I claim it is for the interests of the bee-keeper, the merchant and myself, that nothing smaller than two-pound sections are used, and will try and show how a few bee-keepers can force the many to work at a loss to all concerned. For instance, a bee-keeper in a certain locality uses a few one-pound sections, perhaps gets ⅔ as much honey as he would by using two-pound sections, but gets 1 or 2 cents more, per pound, for his honey. He introduces the small packages; they are liked, and called for, thus forcing the dealer to buy what his customers ask for. Next season he cuts to the half-pound size, and perhaps gets ½ or ⅔ as much as in pounds, but gets a trifle more per pound after the small size is established, all must come to it, and the bee-keeper gets no more per pound for his honey than if all were in two-pound sections. Then again, how soon will we get to ¼ pound and "penny packages." When that time arrives, will be a good time for cash honey buyers to buy a peanut stand. Time was, when the 4-pound box sold for more per pound, glass and all, than the half-pound novelty will ever bring. Since September I have had a standing order for 1 or 2 tons of honey in 4 and 6-pound packages, but in my travels of several thousands miles, I have not been able to find 100 pounds of such size boxes. How has this change been brought about? Simply by the bee-keepers themselves. A few enthusiasts, who want to go a little beyond others, cut the size of box or sections, and in the end all are obliged to adopt that size, and sell their ½ or ⅔ crop of honey at the same price, per pound, that it would have brought in large sections, if none had started the use of smaller size boxes.

I believe bee-keepers earn every dollar they get, and think those who adopt the half-pound sections, will be obliged to earn two for every one received, beside doing a damage to all other bee-keepers. At the rate we are progressing now, we will soon have "the penny package," and then will have to throw in a chromo for each sold. My advice to the bee-keepers is never to use anything smaller than the one-pound sections, and think, if that had never been used, it would not now be called for. I am surprised that so level a headed man as Mr. Heddon, could see anything so small as a half-pound cake of honey.

Wethersfield, Conn.

For the American Bee Journal.

Separators of Wood.

W. D. WRIGHT.

On page 58 of the BEE JOURNAL, F. H. Finch, under the above caption, says: "Now I claim to be the first person in this country that adopted the wood separator, which I did five years ago." If Mr. Finch wishes to sustain his claim of priority in the use of wood separators, he will have to go back several years further. They were used by at least one man in this section in 1867 (some one may have used them even prior to that date, I cannot say); he used them between small frames for surplus, and I used them in the same connection in 1869. In 1876, I used them between two-comb or 4-lb. boxes, in both top and side storing, placing 4 boxes in a row, and glassing the sides after they were filled.

In 1877, I used them with 2-lb. sections, and, in 1879 and since, I have used both wood and tin separators extensively, and have been successful with both, but, for several reasons, I prefer the wood. I have not experienced any of the difficulties mentioned by Mr. Gould and others. I believe that I can obtain just as much surplus honey with the use of separators, as without them.

In 1881, I obtained an average of 100 lbs. comb honey per colony, spring count. I have not had one comb in 500 attached to the separators, unless the foundation had fallen down. I could not entertain the idea of securing a crop of comb honey in marketable shape, without the use of separators of some sort.

In reducing the size of our section boxes, there is certainly a limit beyond which we cannot go, and still make them as profitable to the producer as larger packages, and I believe the advocates of the half-pound section have gone beyond that limit.

Mr. Heddon thinks extra cost and manipulation the main objection to their use. Allowing these to be the only objections (which I think is not the case), I believe there are good and sufficient reasons for their general non-adoption, as both of these items would be increased about fourfold over the 2-lb. section. The item of manipulation may not amount to so much with Mr. Heddon, for he gets his help cheap, but to a person who pays for extra labor it is no small item.

Mr. F. C. Benedict, who has had several years' practical experience with these small sections, tells us in his able article, that he can produce one-third more honey in pound than half-pound sections, and double the quantity in two-pound sections, while Mr. Heddon, whom we are led to believe has had no practical experience with the half-pound sections, is ready to convince Mr. Benedict that more comb honey can be procured in pound or half-pound sections than in any larger receptacle. Shall we base our calculations on theory or practice in so important a matter?

The present market quotations on honey in half-pound section is high, but, doubtless, cannot be maintained when a large quantity is placed upon the market.

Some say that we must cater to the wants of consumers, but I doubt that they ever made so unreasonable a demand as a half-pound section of comb honey. The demand has been created by the producers themselves.

The two-pound section suits both me and my market, and I shall continue its use, let others do as they may.

Knowersville, N. Y.

Convention Notices.

☞ The Union Bee-Keepers' Association will meet in Grange Hall, Eminence, Ky., on Thursday, April 26, 1883. All bee-keepers, and the public generally, are invited to be present.

G. W. DEMAREE, *Sec.*
Christiansburg, Ky.

☞ The Texas State Bee-Keepers' Association will hold its Fifth Annual Convention at McKinney, Collin Co., on Tuesday and Wednesday, April 17th and 18th, 1883; at the residence of Hon. W. H. Andrews.

WM. R. HOWARD, *Sec.*
Kingston, Texas.

☞ The next meeting of the Haldimand, Ont., Bee-Keepers' Association will be held at Nelle's Corners on Saturday, March 31, 1883, at 11 a. m.

H. CAMPBELL.

☞ The Western Bee-Keepers' Association meets at Independence, Mo., April 28, 1883.

S. W. SALISBURY, *Sec.*

☞ The Eastern Michigan Bee-Keepers' Society, will hold its annual meeting in Detroit, April 3, in Abstract Hall, commencing at 10 a. m. An interesting meeting is expected, and bee-keepers are requested to send items or questions of interest to the secretary in time, that they may be announced previous to the meeting.

A. B. WEED, *Sec.*
75 Bagg St., Detroit, Mich.

☞ The Central Michigan Bee-Keepers' Association holds its spring convention at Lansing, in the State Capitol building, on Tuesday, April 17, 1883, 9 a. m. Programme: President's address; Essays: Prof. A. J. Cook, on Wintering Bees; S. C. Perry, on Chaff Hives; C. Case, on Comb Honey; O. S. Smith, on the Best Bee; A. D. Benham, on Extracted Honey; Mr. Harper, on Queen-Rearing; Mr. Waldo, on Best Method of Wintering Out of Doors, in Single-Walled Hives; E. N. Wood, on Sections; and E. Greenaway, on Comb Foundation. All bee-keepers are invited to attend or send essays, papers, implements or anything of interest to the fraternity. A full attendance is requested.

E. N. WOOD, *Sec*
North Lansing, Mich.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1 year, for the Weekly, with **$4,** will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with **$6,** we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For **four** subscribers, with **$8,** we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For **five** subscribers, with **$10,** we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

New Catalogues and Price Lists.

We have received the following new Catalogues and Price Lists of Bees, Queens or Apiarian Supplies:

James Heddon, Dowagiac, Mich.
Bright Bros., Mazeppa, Minn.
A. D. Benham, Olivet, Mich.
W. S. Cauthen, Pleasant Hill, S. C.
F. A. Snell, Milledgeville, Ill.
E. Kretchmer, Coburg, Iowa.
J. P. Moore, Morgan, Ky.
H. H. Brown, Light Street, Pa.
E. J. Baxter, Nauvoo, Ill.

SEED CATALOGUES.

Edward Gillett, Southwick, Mass.
G. L. Miller, Jones Station, O.
Jos. Gilbert, Palmyra, N. Y.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., March 12, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—Extracted, dark 7c. light, 9c. here.

BEESWAX—It is quite scarce. I am paying 30c. for good yellow wax, on arrival; dark and off colors, 17@25c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—There is no excitement in the honey market, but sales are fair to our regular trade. Offerings are plentiful of extracted and comb honey. Extracted brings 7@9c. on arrival. The sales of comb honey are very slow, although there is a large supply of first-class quality on the market. It brings 12@18c. on arrival.

BEESWAX—Comes in slowly and brings 20@30c. per lb., according to quality. CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The past month has not reduced the stock of comb or extracted honey, the receipts having been larger than the amounts taken for consumption. Prices are weak and irregular, ranging from 16c. to 18c. for white comb in the smaller frames; dark, very little selling, offered at 12½c. to 14c. Extracted, 8c. to 10c., according to color.

BEESWAX—32@33c. per ℔. for good.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—Aside from small lots, off in quality, there is none offering. For the descriptions now in market there is virtually no demand,

White comb, 14@17c.; dark to good, 11@13c.; extracted, choice to extra white, 8½@9½c.; dark and candied, 5@7½c.

BEESWAX—We quote 30@33c.

STEARNS & SMITH, 423 Front Street

ST. LOUIS.

HONEY—Very quiet; dull. Comb at 14@16.—some inferior sold at 10c.; strained at 6½@7c., extracted at 7½@8½c., lots in small packages more.

BEESWAX—Scarce and wanted at 32@33c.

W. T. ANDERSON & CO., 117 N. Main Street.

CLEVELAND.

HONEY—Is very slow, just now hardly anything selling, stock on hand quite liberal. Sales slow at 19@20c. for best white 1-lb. sections; 18@19c. for 2-lb. Second grades not inquired after. Extracted very dull at 9@10c. in bbls. and 11@13c. in cans.

BEESWAX—Scarce, 28@30c.

A. C. KENDEL, 115 Ontario Street.

NEW YORK.

HONEY—The prospect is very poor for selling honey in this market. I think there is all the honey here that will sell this season, unless it sells faster during the next month than it has this.

BEESWAX—There is only a moderate supply of beeswax and prime lots held firmly.

Western pure, 30@32c; southern, pure, 31@33c.

D. W. QUINBY, 105 Park Place.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—Our supply is gone; we have none to quote.

CROCKER & BLAKE, 57 Chatham Street.

☞ Mr. W. S. Cauthen, Pleasant Hill, S. C., has sent us one of his improved queen-cages. The improvement consists in the box to hold the candy, and keep it from soiling the mails. It is similar to the Peet cage in other ways, but has a wood slide instead of a tin; this is an improvement, wood being not so cold as tin.

DO NOT FORGET to send for Moore's new price list of Italian queens, nuclei and full colonies. 3-frame nucleus and tested queen, $5.00.
Address J. P. MOORE,
11A1t Morgan, Pendleton co., Ky.

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

FOR SALE
CHEAP!

I have 35 to 50 colonies of Italians, hybrid and Arkansas brown bees, in A 1 condition, with plenty of stores and brood, which I will sell, on the landing, at $3.00 per colony. Address
G. B. PETERS,
11A1w Council Bend, Ark.

(ESTABLISHED 1864.)

BEE-SUPPLIES.

We furnish EVERYTHING needed in the Apiary, of practical construction and at the lowest price. Satisfaction guaranteed.

Send your address on a postal card and we will send you, free, our large, illustrated catalogue.

E. KRETCHMER, Coburg, Iowa.
11A2t4B1t

100 COLONIES ITALIAN BEES,
FOR SALE,

also, queens and nuclei. Will exchange for Jersey heifer, pair Poland China pigs, or Plymouth Rock fowls. Write for prices.
C. WEEKS,
11A4t Clifton, Wayne Co., Tenn.

IMPROVE YOUR BEES

By catching your inferior drones, by the use of the Acme Drone Trap. Price, $1.00. Patent applied for.
L. A. LOWMASTER,
11A1t Belle Vernon, Ohio.

FOR SALE. Colonies and Nuclei of ITALIAN BEES, QUEENS, Extractors, Bee Books, and Supplies. Address, OTTO KLEINOW, opposite Fort Wayne, DETROIT, Mich. 11AB3t

THE CHOICE OF 1,000 SEEDLINGS!
MINNIGH'S PEACHBLOW.

Result of 15 years' experimenting. A perfect potato on all points. Of first quality, **yields enormously,** is never hollow, **does not rot,** and is a perfect keeper. In form, like its parent, the Peachblow. Just the thing to take the place of the worn-out Peachblow. **$1.00 per lb., 3 lbs. for $2.00,** postage paid. Address **Wm. Minnigh, Sunville, Venango Co., Pa.** 11A1t

BASSWOOD SEEDLINGS

Four to eight inches, **$1.50 per 100;** three to four feet, **$7.00 per 100.** Address,
Z. K. JEWETT, Nurseryman,
11A4t **Sparta, Wis.**

100 Colonies of Bees in Langstroth Hives,

Clark's No. 1 Potatoes, wax worked up on Dunham Foundation Mill, Alsike Clover Seed and Silver Hull Buckwheat, for sale by
ERNST S. HILDEMANN,
Ashippun, Dodge Co. Wis.
R. R. Station, Oconomowoc, Wis. 11A1t4B1t

Given's Foundation Press.

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.
D. S. GIVEN & CO.,
1ABtf HOOPESTON, ILL.

50 Colonies Italian Bees
FOR SALE CHEAP.

Address, **W. J. ANDREWS,**
9Atf COLUMBIA, TENN.

FLAT-BOTTOM
COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free.
J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

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THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

"Friendly" Law Suit.

The BEE JOURNAL has always defended *honest* property in inventions as well as in anything else. For the first seven years of its existence, under the able management of our predecessor, the late Mr. Samuel Wagner, it deprecated the war made on our venerable friend, the Rev. L. L. Langstroth, and his patent, and the consequent annoyance and continual appeal to the courts to defend that patent. His present dependent and helpless condition, is mainly attributable to the *war* that was made on him, and it is surpassingly strange that some who know all this, now talk of waging a similar war on another inventor.

On page 127, Dr. Southwick gave his views of the subject, and now Prof. Cook sends us the following:

KIND REJOINDER TO DR. SOUTHWICK.

I am quite sure that my good friend, Dr. E. B. Southwick, and I, do not understand matters alike. He says he is not a Christian. Now, did he understand Christianity as I do, I am sure he would say, that whatever I am, I *desire* to be a true, genuine Christian. Which means: I desire to follow Christ's example. He "went about doing good." In his life was no guile. His were the noble words: "Let him that is without sin, cast the first stone;" and that grandest prayer: "Father forgive them, they know not what they do." Now, my dear doctor, do not you and I desire to copy all this? One thing more: Christ only had words of sharp condemnation for impostors. Now, I have feared—I almost believe that in this one-piece section business, the impostor shows his face. If I felt that Mr. Forncrook had studied, labored and spent money to develop the one-piece section, and so had *honest property* in it, I would rival my good friend, Dr. S., in my vehement demands, that he have his rights. But if, as I surely believe, we would have had the section just as soon if Mr. F. had never been born, and that his claim to invention is not a just one, then, surely, the case is very different. I believe Mr. Muth, because he invented the wire comb basket with inclined sides, has just as good a right to forbid all parties to make and sell extractors, as has Mr. F. to forbid the manufacture of one-piece sections, as he does.

Nay, my friend, there is a principle at stake right here. Let us uphold every true inventor's right to *his own* invention. Let us *denounce* as stoutly the collecting of royalty by threats of prosecution, where no right exists. You speak of 25 cents royalty. Why, Doctor! it is two dollars.

It may not be wise to have the friendly suit. I am, however, quite sure that all the apiarists, who use sections of this kind—and they are *very numerous*—could well afford to pay the $1.00, if the alternative was to buy at the higher price.

Of course, this whole question hinges on Mr. F.'s right. If, as I believe, his right is a fictitious one, then "right," which you, Doctor, are proud to worship, demands that his claims be opposed. Such action does not apply to this case only, but to all such cases which are sure to arise in the future. I am now done.

A. J. COOK.

Lansing, Mich., March 9, 1883.

Of course, we are sorry that Professor Cook (who is, naturally, a very fair-minded and honorable man) has seen fit to use such strong language as *impostor*. It is not like him; and, we fear, he labored under some impulse or unnatural influence.

Here comes another—from Mr. J. Lee Anderson, who desires to be heard:

It seems to me that Dr. Southwick on page 127, has taken the most honest position of any one, as yet, in the patent one-piece section. Prof. Cook suggests that each bee-keeper put in one dollar and have a "friendly" law suit with Mr. Forncrook.

I would suggest that bee-keepers put in another dollar, each, to give Mr. Forncrook, with which to *defend* the "friendly" suit. I think all that are *honest* in their friendship will do so; for, if Mr. F. owns the patent it certainly would be very wrong for bee-keepers to combine together to beat him out of his rights, thereby putting him to great expense and a large "section" of trouble.

J. LEE ANDERSON.

Lawrence, Ill., March 9, 1883.

Mr. Anderson is right. If the patentee did invent the section, and spend much time and money to develop and make it a success, may we not as *honestly* appropriate his pocket-book to our use, without his permission, as to combine to *beat* him out of his interest in it! If it is to be tried *legally*, and bee-keepers desire to have a thorough investigation of the legality of the patent, they should aid one side as much as the other—that is, if they desire to be equally *honest* and *just* to the inventor and to the fraternity.

We have declined to publish replies sent by Mr. Baldridge, because they contained such ungentlemanly and untruthful words and expressions as the following:

> The article is a gross libel, full of lies, and you ought to know it....You misrepresent for selfish ends.....Brace up, and publish my article just as it is written, and not append remarks thereto....Coward....Why, the devil, don't he try to stop somebody from making them?....You are *advising* bee-keepers to raise a fund to test the validity of the patent, and fee the lawyers (liars) with....Cool off....Publish this....——'s article is "chock full of lies."....Some have written me that you are now interested in the F. patent, and you aided him with solid cash, in getting the patent....If you have "stock" in the F. patent, take my advice and unload, before the bee-keepers "smell a rat."

Had the replies been courteous they would have been published, but *no good* can come of such bitterness and strife. We feel *sure* that our readers generally will approve of the controversy being terminated right here.

We have no interest in any patent, or in the manufacture or sale of any apiarian supplies; nor have we ever assisted any one with money to get a patent. The spiteful intimation to the contrary is without the slightest foundation, and was begotten out of malice and ill-will.

CORRESPONDENCE

For the American Bee Journal.

Bee-Keeping as a Specialty.

G. M. DOOLITTLE.

I was very much pleased with Dr. Miller's article, "Who Shall Keep Bees?" on page 36 of the BEE JOURNAL, and also with one given on page 10 of the *Bee-Keepers' Exchange*, which was read before the N. J. B. K. Association; title, "Too Many Eggs in Our Basket." Both of these articles give the opposite side of bee-culture from what is generally presented, and is just what is needed to guard the beginner against going recklessly into bee-keeping, by putting his last dollar into a business he knows nothing of. It is this getting crazy over a business which looks to be a good thing, but with which we are not acquainted, and investing all we have in it, expecting to make a fortune, which ruins so many. To be successful in anything, a man must "grow up" into it, by years of patient toil and study, till he becomes master of the business, when in 99 cases out of 100 he will succeed. I was brought up a farmer, and educated by my father as such, so that, were I to change my occupation at any time, it would be to that of farming, unless I could have time to study up some business better to my liking, before I left bee-keeping. In the winter of 1868-69 I became interested in bees, by reading the first edition of King's bee-keepers' text book, which chanced to fall into my hands. Next I subscribed for the BEE JOURNAL, read Quinby's and Langstroth's books, and in March bought two colonies of bees, and the hives I needed for two years, paying $30. 1869 being a poor year, I had but one swarm from the two, and had to feed $5 worth of sugar to get them through the winter. In 1870 I received enough from them to buy all the fixtures I wished for 1871, and a little to help on my other expenses from the farm. So I kept on making the bees pay their way, as I had resolved, at the outset, that after paying the first $35 I would lay out no more money on them than they brought in, believing that if I could not make two colonies pay, I could not 200. In the fall of 1873 I found I had an average yield of 80 pounds of comb honey from each colony I had in the spring, which was sold so as to give me $559 free of all expense incurred by the bees. I also bought an extractor that season. As I was determined to give my bees the care they needed, and knowing that the time the bees needed the most attention came in haying time, I hired a man to take my place in the hay-field. It so happened that he commenced work on the day basswood opened. Previously I had hived a single swarm in an empty hive, and concluded to devote them to extracted honey. The man worked 16 days at $1.75 per day, and I extracted, during those 16 days, honey enough from this swarm to pay the man for his work. I state this to show that one new swarm of bees was equivalent to myself in the hay-field for 16 days, yet how many keeping 30 to 50 colonies of bees leave them to go into the hay or harvest field, and then tell us bee-keeping does not pay. You can hire a man to take your place in the field, but if you expect to become master of the bee business, so as to make it pay, you cannot hire a man to take your place in the apiary during the honey season. But to return: In 1874 my honey was sold so as to bring $970 free of all expense. At this time I began to think of giving up the farm, but finally concluded to hold on to it one year more, to make sure that I could make bee-keeping pay as a specialty. After deducting the expense of the bees from the sales, I found that I had the next year (1875) the amount of $1,431, and hesitated no longer, but gave up farming and embarked in the bee business, with nothing else as a source of revenue.

As it may be interesting to know how I have succeeded since then, I will carry the report up to the present time. In 1876 my net income from the bees was $774; in 1877, $2,266; in 1878, $772; in 1879, $537; in 1880, $781; in 1881, $1,078; 1882, $822; making a total of $9,990 during the past 10 years. The average number of colonies in the spring of each year, worked to produce this result, was about 48. Had it not been for existing circumstances which required my keeping so limited a number of colonies, I believe I could have taken care of 100 colonies (spring count), and secured nearly double the amount.

In the above showing all expenses have been deducted except my time, which you will see gives a salary of $999 a year, as will be accorded by all. But what about the first four years during which I was experimenting, reading and thinking about bees all my wakeful hours, many of them hours when I ought to have been asleep, giving the subject as much or more study than any lawyer ever spent on his profession. To be sure the bees paid their way, but to what shall I look for my pay? To be just I must divide my $9,990 by 14 years, which gives me about $714 a year as the real pay I have received for my labor. Is this enough pay for the labor performed? Well, many would not be satisfied with it, and multitudes would be glad to get such a salary. P. H. Elwood (one of the largest honey-producers of our State, though never heard from of late years) once said to me, "that a man who was capable of successfully managing 100 colonies of bees would command $1,000 salary a year in any business." If we accept this statement as a fact, then, like Dr. Miller, I can say, "I should be better off in this world's goods if I had never kept bees." But when I turn my eyes to the thousands who do not get one-half $714 a year, working in factories, in the shop, on the farm, and doing drudgery of all kinds and descriptions, I turn my eyes back with pleasure to our fascinating and health-giving pursuit (bee-keeping), and say: It is enough; I am satisfied.

My advice to all thinking of bee-keeping as a business, would be, get one or two colonies of bees; post yourself by reading of and experimenting with them, as you can find time to do so from the business you are already in, and thus find out for yourself which is the better for a livelihood, the business you are already in, or keeping bees. If successful after a series of years, you can be able to take bee-keeping as a specialty, and not be obliged to exclaim with the writer of the article in the *Exchange*, "Too Many Eggs in One Basket."

Borodino, N. Y.

For the American Bee Journal.

Will Freezing Eradicate Foul Brood?

D. A. JONES.

In reply to Mr. O. E. Burden's query, on page 134, as to whether freezing will eradicate foul brood, I would say that I am quite satisfied that freezing will *not* kill the germs; honey subjected to a temperature of from 20° to 35° below zero will not kill the germs. When fed to a nucleus, the following spring, frozen honey gave them the disease. Combs subjected to the same test and temperature were not freed. I do not believe that a tin of "foul-broody" honey, kept frozen in a solid cake of ice in the Arctic regions for five years, would be cured of the disease; nor do I believe that combs can be cleaned by subjecting them to a temperature of from 40° to 60° below zero. I most certainly should advise all to render the combs into wax, boil the honey and scald the hives and frames. You only lose your own time, which will not amount to more than one hour to each colony. The cost of making up the wax into foundation, should not be more than 10 cents per pound and the freight each way.

Beeton, Ont., March 10, 1883.

For the American Bee Journal.

Small Sections, Honey, Eggs, Etc.

DR. J. R. BAKER.

In my last communication to the BEE JOURNAL, I referred to James Heddon as one of the apiarists who advised caution in the adopting of the half-pound sections; but I see in a later article in the JOURNAL that he intends to use the Lilliputian affairs quite extensively, so I must have been mistaken as to what he said on the subject previously. Still, I am of the opinion that the safer plan will be for the majority of honey-producers to be slow in adopting so small a section. I think a reaction will set in before many years in this matter. At all events, I believe the better way is to make the change gradually, and feel our way as we go. Experience is the best test for all untried theories; but it is not always safe to experiment very extensively in the outset.

Mr. Heddon thinks that I err in calling the cross-bred bees "irascible insects." My experience has not been so extensive as that of Mr. Heddon; but, with me, the bees that show from one to two yellow bands have always done the best work for me in the way of gathering honey, and have also proved themselves more nervous and ill-humored. That my experience should prove an infallible guide, I do not claim.

My handsomest, yellow bees have invariably been my laziest, as well as most docile ones; but as I said in the Bee Journal of Jan. 31, I am inclined to the opinion that if careful breeders would select the very best yellow bees to breed from, and without "variableness or shadow of turning," behead every queen whose bees proved to be indifferent workers, that there could be a magnificent strain of golden Italians produced. Let it be well understood that, no difference how pretty a queen may be, or how many well defined, yellow bands every one of her progeny may show, unless they are good workers in the field, the queen should be superseded at once.

Dr. I. P. Wilson, of Burlington, Iowa, has some very handsome yellow bees, and some excellent workers. I asked the doctor where he got his strain, and he said it was a cross of several strains; or, to be more explicit, he got Italians from several good breeders, and bred his strain out of the combination. To my mind this tells the whole story. I have no wish to be dogmatical, but I believe I am right in my conclusions; further experience will tell. The bees in my apiary, last season, were the outgrowth, largely, of a cross between Italians from Dadant & Son and Henry Alley, and native blacks. From 19 colonies, spring count, I increased to 43 colonies, by natural swarming, and 5 swarms went to the woods, because of my absence from the apiary at the time of their swarming. From this little apiary I harvested 2,000 pounds of nice comb honey and 600 pounds of excellent extracted, and this, too, without the use of any comb foundation, except small starters in a portion of the sections.

But cannot just as good a record be made with a well-bred strain of Italians? I mean, bees that are beautifully marked with three yellow bands, and as gentle to handle as the more lazy beauties with which I have had some experience. I purpose getting some of the best Italian queens, the coming spring, from different breeders, and breed them into a strain of my own, and see what the ultimate result will be.

Mr. Heddon thinks that my advice, or my prescription of honey, eggs, milk and blackberries not a good one. I did not make the suggestion for men like Mr. Heddon, who have opportunity and ability to make honey-production, alone, a paying business. But there are thousands of people who cannot do as Mr. Heddon and a few others have done, and are still doing. People must be governed by their circumstances, and while but comparatively few can do as Mr. Heddon does, there are thousands who might procure a few acres of land and raise some small fruit, cultivate a vegetable garden, keep a hundred hens, and a good cow or two, and cap the climax by having a small, well-conducted apiary. If the products of this combination would not tickle the palate of an epicurean, he would be hard to please; so it seems to me. Any man or woman who has common-sense can take a good Manual, like that of Prof. Cook and the Bee Journal as guides, and make a success of bee-keeping on a small scale; if not prepared, or disposed, to go into the business exclusively. The course I have suggested may not make people rich, but it will make them happier than if they were rich, that is, if you call money hoarding, riches.

If all persons, who keep bees, should make it so large a business as does Messrs. Heddon, Doolittle, Scudder, Miller, and a few others, the best comb honey, in my opinion, would not bring 5 cents a pound in the best markets.

Keithsburg, Ill.

For the American Bee Journal.

"Was That Bad Advice?"

JAMES HEDDON.

Yes, doctor. We still consider your admonition to "set a rack of thin sections down on the brood frames, as the worst kind of advice. You are surprised, however, that I should call such manipulation a violation of the instincts of the bees. In the way in which I mean "violation," I will try to show you that it is. Some 5 or 6 years ago I got the idea that I could make top bars to movable frames answer the double purpose of top bars and honey-board. I made them thick and just wide enough to leave a ⅝ space between them; these made the narrow, bottom piece of my section the same width, and arranged the rack to hold sections in such a way that they would rest directly on the top bar, which came flush with the top of the hive. It seems to me that all will readily guess the solidity with which the sections will be glued to these bars and the difficulty of removing them. I found, when putting this system into practice, that the bees took to the honey boxes no more readily than when they pass through a honey-board and two shallow air-chambers. I found I had been "straining at a gnat," and had now, either to "swallow a camel," or throw away this experiment. Of course, I threw it away.

When I began bee-keeping, I lost so much by following bad advice, coming from those who wrote up a big thing before they had thoroughly tested it, I decided that I would not advise the use of methods that I did not know to be best by actual experience. Hence, I passed this experiment into oblivion, from whence I never should have called upon it, but for the very bad advice given by the doctor. With the case or super method, more especially with the honey-board between the upper and lower stories, there will be no bits of comb or glue connecting the sections with the lower story of the hive; the case will lift off easily and clean. While there are most serious objections to the sections touching the frames below, I see no advantage unless it be to make it more difficult for thieves to steal your surplus honey. Let "several apiarists of large experience" assure us of what they please, is there one such apiarist who now adjusts his sections as advised by the doctor? If so, let us "chip in" and send a missionary to visit him.

The doctor infers that his impractical method is almost a necessity to the half-pound sections. Why, I cannot conceive. I can make bees work just as fast in half-pound sections as in two-pound sections. The facts are these: A worker bee is a small animal which can readily pass through a space 5-32 of an inch. She is ever ready, when in the least crowded for room, to occupy the 5-16 spaces above the frames with a cell here and there in which to place her nectar, and yet many suppose she is going to bump her elbows in half-pound sections. It seems to me she has more room to turn around in a row of eight half-pound sections than in a one-pound section, whose either side is lined with tin separators.

Allow me to thank Mr. C. R. Isham for his nice samples of wood separators, as well as his concise replies to my queries. I shall not only put the samples he sent me into "practical experiment," but likewise a whole box from the same source.

F. C. Benedict, on page 117, strikes right out from the shoulder, and hits us non-separator men a pretty hard blow. I like him for it. His article carries with it evidence of earnestness (that's twin brother to honesty, you know) and experience. He says that no one can manipulate 100 colonies for comb honey, and produce it in first-class marketable order without the use of separators of some kind. Regarding the first part of his proposition, I will say, that with my case-method, without separators, I can manipulate far more colonies, and with greater comfort, than can be done with any system with which separators are used. Whether the honey is in first-class marketable order, the question will arise, what is "first-class?" I get the combs so straight that nearly all producers and honey merchants think I must have used separators. More than 2-5ths of my combs will glass. None touch each other in the cases. I see no more danger of leakage or breakage than with combs stored between separators. Of course, not *all* the combs are as smooth and straight as those built with separators. I wish they were, but is the difference great enough to pay me for using separators?

The experiments I made some years ago, pointed to my assistants and myself, the fact that we lost honey by the use of separators. We may have been mistaken. Mr. Benedict's sentence, "I know of what I speak," has weight with me, and strengthens my determination to put this matter to an extensive and undoubted test the coming season. What Mr. Benedict says about thick and thin combs, I think nearly correct. There is a point in the thickness of combs, or in the distance given to the bees in which to build combs, at which we will get most easily the straightest and best combs, and that point reached we will also find that with said thickness we shall get our combs built, filled and sealed quickest as well as straightest. Upon this point I have experimented considerably, and I believe, and shall adopt 1½ inches without and 1¾ scant, with separators. Taken all in all, I feel thankful to Mr. Benedict for his vigorous article.

Dowagiac, Mich., March 3, 1882.

For the American Bee Journal.

N. E. Ohio & N. W. Pa. Convention.

The fourth annual convention of the Northeastern Ohio & Northwestern Pennsylvania Bee-Keepers' Association was held in Andover, Ohio, Wednesday and Thursday, Feb. 14, 15, 1883. The convention was called to order at 1 o'clock p. m. by President M. E. Mason.

After roll call and reports, the following officers were elected for the ensuing year: President, E. F. Mason, Jefferson, O.; Secretary, C. H. Coon, New Lyme, O.; Treasurer, N. T. Phelps, Kingsville, O.; Vice-Presidents, Ashtabula Co., O., D. H. Troop, L. D. Ormsby, C. L. Payne, P. F. Twitchel; Mercer Co., Pa., W. H. Fonner, J. P. Sterrett, A. Martin, S. Hogram; Erie Co., Pa., D. Videto, W. S. Stinson, D. W. Nichols; Crawford Co., Pa., D. Carkhuff, A. J. See, A. W. Anderson, Charles Olliver; Trumbull Co., O., J. S. Barb.

The first question presented for discussion, was: "The Best Method of Transferring Bees from Box Hives." Mr. Heddon's plan of drumming the bees out, was thought to be the best way, provided it is done when the weather is warm enough to prevent the brood from being chilled.

A member asked if it was necessary to keep the combs right side up when transferring them to the frames. Mr. Sterrett said he had put them in the frames bottom upwards, and found no difference.

"Best Method of Rearing Queens." Mr. Videto advised all to never try to rear them from dollar queens. He had tried it several times, and never got a decent one. He thought the best way was to get the best, to rear queens from. He always obtained better queens in a good honey season than in a poor one.

Mr. E. Mason said he would feed his queen-rearing colonies, in a poor season, and thus rear just as good queens as in a good season. He thinks the position of the cells, in the hive, quite important. He would place narrow strips of comb between the frames, near the top, and let the bees build the cells downward from them.

"Best Method of Introducing Queens." This brought out an animated discussion. Several gentlemen had their pet way of introducing, but it was thought the only safe way was to place the queen on a comb of hatching brood. Mr. Ormsby said, he once tried, for several days, to get a colony to accept a queen without success. He finally removed all the frames from the hive, leaving the bees on the bottom board for a few hours. He then placed the caged queen in their midst, and left her till morning, when he liberated her, and in a few hours replaced the frames, and she was received all right. Adjourned to 7 p. m.

Evening Session.—Convention called to order at 7:20 p. m.

"What is the Best Way to Separate Two or More Swarms that Alight in One Cluster?" Mr. Videto has had as many as six swarms alight in one cluster. He has a long hive with division-boards, making as many parts as there are swarms in the cluster, and places a comb of brood in the centre of each part, with a frame of foundation, or comb, on each side of the brood; then empties the bees all together in front of this hive, and he usually finds a queen in each part next morning.

"The Best Method for Securing Comb Honey." Mr. Videto examines his bees as soon as he unpacks them, in spring, and takes frames of brood from the weakest colonies and adds them to the strong ones; thus, in a few days, he has half of his colonies very strong, and the other half very weak, and from these strong ones he always gets a large amount of comb honey early in the season. As soon as he gets them half ready for comb honey, he commences to build up the weak ones to run for the extractor, later in the season. M. E. Mason said, if we want plenty of good comb honey, we must have strong colonies early in the season. He would put on the boxes when the bees begin to build bits of comb on top of the brood frames. If the bees do not go up into the sections readily, take a frame of sections that are partly filled, and place it in the centre of the upper story, and they will usually go to work in them. Adjourned to 9 a. m.

Second Day.—Convention called to order at 9:15 a. m. President E. F. Mason in the chair. Several members addressed the convention on different topics, giving much information and advice, especially to beginners.

"Comparative Value of the Different Races of Bees." Italians were thought to be the best, all things considered. President Mason thought his blacks filled the sections fuller, and capped the honey better than the Italians, but obtained less honey.

"Best Method of Wintering." M. E. Mason thinks they should be well packed early in the fall, so as to get their house in order, before cold weather comes on; see that there is plenty of good, sealed honey, or, if the honey is not of the best quality, remove it entirely and feed them sugar. He has a few that are on the summer stands without packing, and they have come out several times, when it was too cold, and the ground around these hives are covered with dead bees, while those packed are in good condition, and he thinks they will stand it another month without a flight. P. F. Twitchel, one year, packed all his colonies but six. Those packed wintered well, while the six, not packed, all died. Mr. Videto spoke of a neighbor who had a swarm alight on top of a fence, and he put a nail keg over them, bottom up, and they went to work in it and remained there all winter, with the bottom all open, and no upward ventilation; they came out in the spring, bright and strong.

Apiaries.	No. of Colonies, Fall, 1881.	No. of Colonies, Spring, 1882.	No. of Colonies, Fall, 1882.	Comb Honey, lbs.	Extracted Honey, lbs.	Beeswax, lbs.
1.....	5	5	12	300	....	5
2.....	90	90	105	300	400	20
3.....	20	2	6	150	....	..
4.....	11	10	23	1,000	400	..
5.....	14	23	56	400	....	7
6.....	2	2	3	100	....	5
7.....	..	6	13	100	....	..
8.....	3	2	5	150	....	..
9.....	54	54	80	4,500	1,000	7
10.....	6	6	25	....	300	..
11.....	5	3	9	....	60	..
12.....	26	9	28	60	400	..
13.....	..	3	6	50	....	..
14.....	28	27	56	800	....	..
15.....	6	6	13	400	250	40
16.....	42	36	62	1,800	400	..
17.....	2	2	7	....	....	7
18.....	8	8	20	250	435	10
19.....	55	52	72	1,200	2,000	15
20.....	62	60	83	300	2,400	50
21.....	112	102	73	1,400	300	20
22.....	6	6	12	225	....	..
23.....	1	2	6	200	....	..
24.....	2	2	5	200	....	..
25.....	2	5	10	180	....	..
26.....	4	4	6	....	440	5
27.....	5	5	8	125	50	..
28.....	2	2	4	35	....	..
29.....	4	3	7	60	....	..
30.....	15	15	30	400	....	..
31.....	5	5	10	50	....	5

The next convention will be held in Jefferson, Ashtabula Co., Ohio, on the third Wednesday and Thursday in January, 1884. C. H. COON, *Sec.*

For the American Bee Journal.

My Report and Other Items.

R. GAMMON.

I have just been reading about large reports, separators, etc. I have no use for separators in getting my honey in marketable shape, and as far as half-pound sections, I shall not use any, at present; doubtless, there will be a sale for a few at good prices, but let the supply be large, and I doubt if they will bring any more than one-pound packages. I use 1½ pound sections, and find no trouble in selling them at about 17 cents per pound. In regard to the large yields, I have not much to say, only I would like to know all the particulars in connection with it. I have never been able to obtain any such amounts, as some say they have, but I have got nearly as good an average, per colony, as others, where the most of the honey was taken in the combs or sections; my average, last year, being 164 pounds per colony, spring count, and had but little increase. Last year my honey was all taken from clover and basswoood, with the exception of about 200 pounds of fall honey; the average was 153 pounds from 16, in spring; increased to 23 by the nucleus plan; I made my increase late, so I took no surplus except from 3 colonies.

I am inclined to think there can be more honey obtained by letting them swarm once, if any one wants increase. The most I ever got from one colony was 238 pounds, part extracted and part comb; this colony did not swarm. Last year my honey was all white, and, of course, it was taken in much less time than the year before, when I got as much dark as light. This, I think, is owing to a better plan of getting my honey. It seems to me that one set of sections is not enough for a swarm of bees to work in, when you do not intend for them to swarm, as is the case with mine for the last two years.

Last year my best results were from my best Italians; this year it was from two queens which show the three bands only when filled with honey. I think there is a little black blood in them; still there are no bees wholly black; they are a little crosser than some of mine, but not bad. I have raised some queens from one, and will watch them with interest next summer. They may be something like Mr. Heddon's, but I see his average was rather small, as given at the Chicago convention. I have one of his queens, and expect to have some red clover honey to sell next year. The two colonies of dark bees gave 200 pounds each of comb honey, as near as I could judge by the sections.

Rockton, Ill.

For the American Bee Journal.

Bee-Keeping in Missouri.

H. S. VAN ANGLEN.

My apiary is situated on a high commanding table land, a short mile south of the Missouri river, in Lafayette County, Missouri, and its 90 odd hives of bees stand in the wintry air, on their summer stands, where they are kept throughout the year. This plateau is dotted over with an occasional oak, maple, wild cherry, and numerous apple, peach and apricot trees, flanked north and northwest by a back view of dwelling and out-buildings, and surrounded west, south and east by extensive fruit orchards, with a linden or basswood forest on the north. The hives are scattered and placed at unstudied, but convenient intervals over this lawny, tree-sheltered spot, singly or in rambling lines and irregular groups, under and among the spreading trees, most of them fronting the south, while, here and there, some face in other directions, but none west, and as they are mostly of the American type, and painted white, it would not be a very lively stretch of the imagination to liken this bee yard, on some clear, placid moonlight night, to a ghostly cemetery, or during a genial summer day to indue it with the semblance of a picturesque, well-to-do and inviting hamlet of neat and cozy cottages, at least such are some of the conceptions and fancies that a few of the more visionary visitors entertain for it.

I am neither a specialist nor an expert in bee-culture, but manage, after an easy fashion of my own, to keep on hand, from year to year, about 100 colonies of bees—do not want any more—sometimes giving them a good share of attention, and then, again, in a great measure, neglecting them, having varying success according to season, attention given, etc. I have, up to the present winter, generally prepared my hives, in due time, for the cold months by the common method of quilts over frames, contracting the entrances, stuffing caps and all other available space with some good, porous material, and, sometimes, laboredly stuffing and sheltering, neglecting a few, by way of experiment, almost wholly, and have found the per cent. of loss to vary but little; and have but few dead bees.

The past season, however, my time was too much occupied with other things to fix up my hives as usual. On the last of November I removed the honey boxes and simply spread quilts over the tops of the frames, contracted the entrances, and left the hives in that condition throughout the weeks of terribly severe weather that ensued—the mercury in January scored 20° below zero, and lingered for days at a time, off and on, around zero and lower. An examination on Feb. 6, found all quite satisfactory, very few dead bees, hives full of life and vitality, and in first-rate condition. Then I had them well cared for, "tucked in" the neglected bees—something like taking in the grindstone after the cow had eaten it up. It is possible, however, that the severest test is yet to come with the varying climatic changes that will still necessarily occur. My experience in this latitude for a number of years past, with experimental hives and otherwise, is that bees simply but carefully fixed up for winter, have commonly come out in the spring fully as well or better than those so elaborately and circumspectly prepared after the "must be" plan of the would-be orthodox.

My best season's operation was when honey bore a better price than now. I received about $1,200 cash for nice and fair comb honey sold from something less than 100 strong colonies, which were closely supervised and manipulated in a practical common-sense manner throughout the season. I rather incline to the opinion that a considerable part of the gratuitous advice, so freely offered, and promulgated as science in progressive bee-culture, is little better than "clap trap," or in more familiar parlance, "humbuggery," to accelerate the aims and ends of interested parties, but as I am not as full of advanced scientific and progressive ideas as some, perhaps I should be excused for my non-appreciation of the exuberant "pile on" in regard to the special make-up and material management of an apiary for profit that not unfrequently meets the eye in this excessive age of wonder and progress. An advanced idea that is given for what it is worth, is more or less acceptable and relished by the sincere and progressive, but an idea with a selfish handle, that is calculated to mislead and damage, should be indignantly repelled.

How to winter bees successfully is having much attention and study by able and comprehensive minds, and the various interesting experiments being made, notably those of chaff packing, may possibly go far towards a satisfactory conclusion, and, perhaps, after all that is said and done, some well devised and defined out-door plan, wherever admissible, will be found superior to any special house or cellar arrangement. Such depositories are, to a certain extent, unnatural; the bees are put under a kind of surveillance, restrained and deprived of free action, and the possible sequence is debility and disease; whereas, the out-door methods allow them to indulge their natural instincts whenever a suitable opportunity offers, thereby enabling them to retain their normal condition, and are thus the better fitted for the active requirements of the hive with the opening of spring. I believe it is common for those who winter their bees in special repositories to complain more or less of "spring dwindling," but this trouble I have almost invariably escaped, therefore, I shall continue to adhere to the summer-stand idea of wintering, as safest and best in all favorable localities.

Waverly, Mo., Feb. 15, 1883.

For the American Bee Journal.

Progressive Bee-Culture.

W. M. WOODWARD.

MR. EDITOR:—I want to congratulate you upon your success in giving us a really good BEE JOURNAL. So far as I know there are only about two other publications issued, even from progressive Chicago, that will compare with it. I wonder how many of us do not date a new era from the time the JOURNAL first made its advent on our tables.

I propose, with your permission, to say to the readers of the BEE JOURNAL: *Study the habits and instincts* of the bees for yourselves, and make everything else conform thereto; hives, profits, management and all. Read for *ideas*, but "look before you leap," for what will be a success with some one else by his methods, may, perhaps, prove a failure with you by yours. But, if you have the genius of a genuine bee-keeper, you will soon hit upon something that will be better suited to you than you will be likely to get by copying any one's fixtures.

Conservatism has a proper place in bee culture, but its right use is in holding on to the best, and only the best to be had, and not to a thing because our natural father's, or father's in bee culture, have used it. I say, therefore, if you can, make something good, use it and show it to your neighbors; but do not rush into the patent and monopoly business.

I hear a call for a "standard hive," which might be a good one, and it might be otherwise. It would, no doubt, be very convenient, but strikes the death blow to inventive genius, and makes bee-keeping a machinery business.

I am one of those who look for greater advancement in the future than in the past. A standard hive, fifty years ago!! Just think of it! A log gum manipulated by the brimstone match. We cannot afford to stop here; but let us rather "go on toward perfection." When I read the proposition for a vote on hives, I thought, why not change that a little and call for the *solid scientific principles* of a really good hive, and make all kinds conform to them, and thus get our standard hive. The number of hives is legion, but not so the good ones, much less the sound principles of hive construction.

I want to say to "Subscriber" of Milan, N. Y., that if he will take his American frames and put them in a hive, on Mr. Doolittle's plan, he will have no reason to regret it. I do not use the American frame, but would use it so, if at all. In my judgment the American frame would be much improved by cutting, say, a 3-16 slot out of each side of the frame nearly to each end, letting the comb attach in the centre of frame, and using no honey-board. No trouble will be experienced if the bee spaces are not large enough to allow them to start comb up through them.

Custer, Ill., Feb. 3, 1883.

For the American Bee Journal.

Upward Ventilation in Winter.

H. L. JEFFERY.

In the BEE JOURNAL for Jan. 24, page 52, Mr. G. M. Doolittle tells us about trying the Hill plan of shutting off all, or nearly all, of upward ventilation. I have, for 2 or 3 years, been watching to see if Mr. D. would not say something about hermetically sealing the top of the brood chamber, but not one word, or even a hint, at it. In 1876, I had a very small swarm given to me, late in the fall, with not more than comb enough to fill two Langstroth frames, if it had been transferred, but I left them in the box hive and fed them some syrup; then corked the hive tight; I put the hive in a large dry goods box, in a very sheltered situation, and, in 1877, it was one of my best colonies. The same fall I took two hives that held 13 American frames each, and put the bees in the centre on 5 combs each, set up a tight-fitting division-board each side, laid some sticks across the tops, then covered with a cloth and put 4 or 5 thicknesses of heavy manilla paper over the top, and packed the sides full, letting the paper extend front and rear, laid another sheet over the top of the hive and pressed the cap down carefully; this completely sealed them up, and they had more brood than any other 4 colonies put together, on May 1.

I have, since then, continued to practice the sealing method, more or less, every season, with perfect success. I have written to and talked with a number of bee-keepers about it, but it did not accord with the ventilation theory.

Mr. A. F. Moon once wrote to me "that what I know is worth as much to me as what others know is worth to them, if they do not agree with me." Now, that Mr. D. has started to use a sealing method, I feel confident, as he infers, that by this method one of the steps to successful wintering may be gained.

Mr. D. also infers that we shall hear of fearful mortality, this winter, among the bees. Jan. 30 I examined about 40 box and frame hives, and I noticed that the dysentery is beginning to show itself in all the frame hives, where there was any amount of bee bread; those having sugar syrup were clear, clean and bright; and those wintered on candy of honey and sugar, were as bright, clean and active as in summer. As Jan. 30 was the first day for bees to fly to any extent, since the middle of November, they had been shut in for 10 weeks or more, but their flying showed which were wintering best, before examination.

From what I have seen, for the past six winters, I am sure that the Langstroth frame, properly prepared, is just as safe as any. I have tried the American, Gallup, both Quinbys, a frame the size of the Eclectic, and the Langstroth: the advantages of the latter for surplus more than compensates for its disadvantage for wintering. With a hive having chaff, front and rear, with 3 inches of chaff under the bottom board, and room on the sides for chaff cushions, a good tight-fitting enamel cloth over the frames, with a passage ⅜ to ⅝ over the top bars, and then some chaff on top of the cloth, I will risk the best or poorest colony on the Langstroth frame as quickly as any other.

I have noticed, so far this winter, that the box hives are taking a cleaning out that will make them beautifully scarcer than they were one year ago, and those in frame hives, properly cared for, are laying. My bees are not suffering much this winter; about 19 per cent. of the bees in box hives are playing out, so far, from all that I hear of.

Woodbury, Ct., Feb. 2, 1883.

For the American Bee Journal.

Central Kansas Convention.

In pursuance to a call, the bee-keepers of Central Kansas held their first meeting at Manhattan, Kansas, on Saturday, March 10, 1883. During miscellaneous business, a resolution was adopted asking the authorities of the State Agricultural College to teach apiculture in connection with entomology. The treasurer reports finances in good condition. The secretary gave encouraging reports from this section of country. The association listened to a paper by Mr. Robert Corbett, entitled, "Hints to Beginners," which was just what we needed. Association adjourned to meet on June 30, 1883. Seven members signed the Constitution. We hope to meet bee-keepers from all parts of the State at our next meeting, so as to put us on a firm footing.

THOS. BASSLER, *Sec.*
Box 436, Manhattan, Kansas.

For the American Bee Journal.

Can we afford Half-Pound Sections?

W. E. CLARK.

The half-pound section has been receiving considerable attention. Of all the articles I have seen on that subject, the one by G. M. Doolittle, in *Gleanings*, for February, is the best; in fact, he hits the nail on the head every time. It will be well for us to read it carefully and profit by the advice he gives. He discusses the subject in a straightforward and unbiased manner; does not gush over, as some do, but gives the facts in a plain, business-like way, and I would say that it will be well if apiarists heed the advice given. It has become a fact, well established, that the smaller the sections the less honey you get. The great bulk of apiarists keep bees for the profit, and that comes from the surplus honey we get. Now, if cutting down the sections would raise the price of honey, so that we would realize as much for it as in larger ones, adding the shrinkage in quantity, extra expense, and labor, it would do; but past experience has taught us that it cannot be done. Let the half-pound box become the standard, and you and I will get no more for our honey than we do now for that in one and two-pound boxes. Is this our past experience? We think so.

Mr. Doolittle tells us, by testimony unimpeachable, that it cannot be sold in half-pound sections, for less than 46c. per lb., to warrant us in using them Do you think Mr. Doolittle's views are a little strong? He does not give his individual views only, but they are backed up by figures and past experience that challenges successful contradiction.

The editor of *Gleanings* talks about catering to the wants of the consumer. Now, candidly, is it not the supply dealer that wants the half-pound section? There is a certain class of men, and we have some of them who are producers, but, as Mr. Doolittle says, have a restless spirit, always trying to have something different from anyone else, and this class have tried almost all kinds of occupation and failed. The buncombe reports published by some visionary bee-men have called them into our ranks.

The general opinion of producers is that we must get double the price for honey in half-pound sections that we do for that in the one and two-pound boxes. We all know that when the half-pound box sells for 18 and 20c. per lb., as it certainly must, if it becomes the standard size, *that it will not pay.* Some say that we must use only a few half-pound sections. If the consumer wants them and is willing to pay 46c. per lb. for such honey, it is best to use them, and not until then. I do not believe that it is best to educate them to use them, but let them entirely alone. If producers wish to cut their own throats they will keep cutting down the size of sections, or will allow supply dealers to persuade them into using them. They will, perhaps, be wiser some day.

I have sold and produced honey for the last 25 years, and will say that cutting down the size of sections has never been called for by the consumer, but by supply dealers. This restless spirit, predominates I think, in the supply dealers. There is no general demand for a half-pound section. I have taken some pains to find if there was any call for them, and I never have found a buyer that said there was a call for it by the consumers. Mr. McCall, Thurber's agent, says there is no call for them in New York city.

The facts in the case are just these: one of two things must come to pass, if the half-pound box is used, honey-producing will become a non-paying business, or the consumer must pay double the price he now pays for comb honey.

Oriskany, N. Y., Feb. 20, 1 883.

For the American Bee Journal.

West Texas Bee-Culture.

T. C. GREENWOOD.

Our winter is now nearly over, having been not the severest we have ever had, but a very cold one. Our bees have come through all right, and have been bringing in pollen for two weeks. We have no flowers yet visible, and where they get the pollen from we do not know; but surmise it is obtained from the little buddings of the long moss, which grows profusely in our river valleys.

I experimented somewhat in my wintering; placing some colonies in the lower Langstroth story, covering the cloth above with cotton seed; others I left with upper story on, giving them also a covering of seed. I can discover no difference in them now; all being right, with laying queens, now actively breeding up. This early active breeding is not desirable in this latitude, it promises early swarms; but where rapid increase is not desirable, it is troublesome, as our honey, from our main honey plant, does not reach us before the first of May.

I commenced, last year, with 24 colonies; increased to 49, and obtained over 2,400 lbs. extracted, and over 200 lbs. comb honey, in one-pound sections. From one colony, transferred from a box hive March 20, I obtained 195 lbs. extracted honey and one swarm of bees. From a colony swarming out on the same day, I obtained 145 lbs. by tiering up to four stories. This last item explains to our Northern friends the wonderful reports coming from Texas, made by some of our enterprising bee-keepers. "Spring count," in this warm climate, does not remain spring count long, and a vigorous swarm emerging in March, by judicious management, can be made ready for work early in the honey flow, and increase the general average greatly. Northern brethren, who doubt our occasional enormous yields, may make a note of this, besides remembering that such a honey flow, as we had last year, is seldom seen in Texas.

I have resided in Texas 30 years; have had bees for 20 years; have run against several "patent hive" venders, who "bled me some," and only last year "got down to work" in the Langstroth. In some seasons our honey flow is immense, sometimes from honey dew, mostly from flowers, especially the "mint;" but in other years, as in California, we get nothing. Western Texas is, on the average, a good honey country, and bee-keeping, on the right plan, will undoubtedly pay here. We are improving our colonies with the best Italians; have been patiently awaiting the results of Northern experiments with the Cyprians, Syrians, etc. Our three well-defined races here are enough, just now, for us. Our little black bee is irritable enough to teach us to avoid some of the others that have been tried. Our brown bee, mixed with the Italians, is a decided success, the cross producing a wonderful worker, not always irritable, and exhibiting the traits evidently best in both races.

The excessively prolific bee, so much desired by many up your way, is not the best for us. We have plenty of time to get ready for the honey flow; and too much swarming is decidedly troublesome, and sometimes attended with loss as well as inconvenience. I witnessed an amusing illustration of this, at the apiary of my friend and neighbor, J. S. Tadlock, last year. He is one of our most advanced and enterprising bee-keepers, had purchased one of Root's chaff hives, and had it already for work, last spring, in crack order. He gave me to understand, that with that colony, he was going "to trump" Mr. Eckman, a bee-keeper on the Brasos east of us, who had, the year before, obtained 450 lbs. from one colony, and bragged about it in the BEE JOURNAL.

Well, the chaff hive became full of bees. He declared there was one-half bushel of them, and so there must have been, for I called to see him, and looked at them myself, admiringly. They were in fine order, and the honey just flowing in, "so to speak." I went again next week; it was early in May, and immediately noticed that there were but few bees flying in and out of that chaff hive. Mr. Tadlock explained. Says he: "I went around the other day, suspecting nothing, when I discovered they had swarmed, in fact, nearly all went off, and we knew nothing about it. How they got away thus, I do not know." He did not run that colony against Mr. Eckman last year, but he went quite up to his figures, with several others. He is an excellent man, enjoys a joke, and will pardon me, I know, for telling on him, how he intended to "lay it on" Mr. Eckman.

Our people here are not yet trained to eat honey a great deal. We sell our extracted at 10 cents and our comb honey at 15 cents. Bee-keeping, in fact, is not regarded as even business with most of our people, but we have some few men all over the State who are abreast of the times, and who are opening the eyes of the old box-hive men.

With the excellent BEE JOURNAL on my table (many single articles worth more to me than the subscription price), surrounded with the appliances of our fascinating art, I am well pleased with my progress. I notice one fact: wherever the JOURNAL is taken, the patent hive "mothtrap man" disappears, no more to return. To the JOURNAL and other similar publications, wherein Heddon, Doolittle, Dadant, Pond, Hutchinson and others give us their best thoughts, we owe a great debt of gratitude.

Luling, Texas, Feb. 20, 1883.

Convention Notices.

☞ The Texas State Bee-Keepers' Association will hold its Fifth Annual Convention at McKinney, Collin Co., on Tuesday and Wednesday, April 17th and 18th, 1883; at the residence of Hon. W. H. Andrews.

WM. R. HOWARD, *Sec.*
Kingston, Texas.

☞ The next meeting of the Haldimand, Ont., Bee-Keepers' Association will be held at Nelle's Corners on Saturday, March 31, 1883, at 11 a. m.

H. CAMPBELL.

☞ The Union Bee-Keepers' Association will meet in Grange Hall, Eminence, Ky., on Thursday, April 26, 1883. All bee-keepers, and the public generally, are invited to be present.

G. W. DEMAREE, *Sec.*
Christiansburg, Ky.

☞ The regular meeting of the Farmers' and Gardeners' Club, will be held April 2, at A. Z. Madison's office, Fredonia, N. Y. Question: "Bees, Fish and Poultry." Mr. U. E. Dodge will open the discussion with a lecture on "Bees and Bee-Culture," giving practical manipulations of the hive, showing the various improved implements, devices and terms used in bee-culture, illustrating the lecture with a colony of bees. Bee-keepers are especially invited to spend the afternoon at Sunshine Apiary, where Mr. Dodge will try and entertain them. Mr. Dodge is a thoroughly practical apiarist, and this will be a rare treat for bee-keepers in Western New York. Means will be taken to form a Bee-Keepers' Association for this part of the State. A. Z. MADISON, *Sec.*

U. E. DODGE, *Pres.*

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Saving Queenless Colonies.

My bees had a good flight on Feb. 28; they have been confined since Dec. 1. I examined all, and they were in good condition, covering from 5 to 8 frames, Langstroth size; they have consumed more honey and come out stronger than at any time for 5 years; 2 are queenless, and 7 have more or less brood, out of 10. 1. Can I get queens from the Southern States soon enough to save them? 2. How much candy, per week, will it take to carry a 7 Langstroth frame full of bees through? My bees are most as strong as they were last fall, and have no dysentery. D. S. BURBANK.

Grundy Centre, Iowa, March 1, 1883.

1. I think you can, but I cannot see that it will pay you, if you care for the queens *only* for that purpose.

2. I have never had satisfactory results from feeding candy of any kind. I feed liquid food, have just fed some few colonies, and one took down 6 lbs. in three hours. That colony is now off my shoulders for the season.

Spring Work.

I put 25 colonies into winter quarters, and all of them are doing well. I want to move them 2 or 3 rods in my yard. 1. When is the best time to do it? 2. How early in the spring shall I begin changing, reversing frames and feeding to stimulate brood-rearing? 3. How often should the frames be reversed? E. NEWCOMB.

Plank Road, N. Y.

1. At the first period, when they will be most likely to be shut in for a few days, by cool weather. When you move them, or just when they are about to fly from their new stands, smoke and jar the hives, and put boards before the entrances, so that they will bump noses, or have to fly out sidewise around it, and remove any fixtures from the old quarters that may make them "look like home."

2. After having fed and reversed frames, to stimulate early breeding for years, some years ago I abandoned it; and with hives properly made and arranged, no such practice pays.

3. As a rule, never; for the reasons before mentioned.

Bees in Texas.

I have kept bees for 35 years. Here in Texas, as a general thing, they do tolerably well. I have 90 colonies in frame hives. Last season was a fine season for honey. I took from 50 to 150 lbs. from each. I could have got ⅓ more, if I attended to them, but as I have no one to assist me, and the farm to run, the bees filled everything full of honey, and a great deal on the outside, before I could attend to them, and when I got to taking honey, I went at it with a rush, got the honey scattered around, and the bees went to robbing, and I have had a great deal of trouble. How can I check robbing? Some of my strongest colonies were diseased; the brood failed to hatch, and they became weak, and the moth and robbers destroyed about 20 colonies. The bees are all blacks; they seem to be wintering well, all on the summer stands. I never knew of any being housed here in winter. Our bees always go through the winter safe, when supplied with honey. The bees have had a flight every day for 6 days; the peach trees will be blooming in 2 weeks, if the weather remains favorable. J. E JACKSON.

Richardson, Texas, Feb. 22, 1883.

First, in this branch of our business an ounce of prevention is worth ten pounds of cure. When once really crazed with robbing, the only practical way I know of is to remove the robbed colony to a cellar, give plenty of ventilation, and close up the hives. Protect the other colonies in the demoralized yard by close contraction of the entrances. If the weather is hot, shade or ventilate the hives at the top.

A Diseased Colony.

Last season my honey crop was about one-third. Bees gathered a good fall crop of fine quality. We had a very cold spell on Jan. 17 to 21; the thermometer was down to 18° above zero. On Jan. 28, my bees commenced carrying in pollen; we had one short cold snap since, and the bees are working now very fast on wild peach and dogwood; I notice one of my colonies has a strange disease; the bees crawl out of the hive in a trembling condition, turn over on their backs and die. Please tell me what is the cause of this? In regard to the use of separators, my experience is (and I believe that it is a good teacher), that with one-pound sections, filled with comb foundation, and with the use of tin separators, when honey is coming in fast, I can get as much honey as those who do not use any, and I know I can have nice, straight and well-filled sections. Everything bids fair for a fine honey season; peach and plum trees are in bloom, and farmers are planting corn. J. W. ECKMAN.

Richmond, Texas, March 5, 1883.

Having never witnessed any such phenomenon, I am entirely unable to account for it.

Destructive Birds.

Are martins destructive to bees?

Creston, Iowa. A. E. FOOTE.

I do not know, but I think not; at least, ours here are not known to eat bees.

Sundry Questions and Answers.

1. Is it necessary to have the tin bars and diagonal wires (as described in Mr. Root's circular) in wire frames? 2. Are queens, when sent by mail, wrapped up in the cage so as to be invisible? 3. Is an extractor, with its basket having slanting sides, an improvement over one having vertical sides? 4. How many Langstroth frames would you recommend for a hive? Will Mr. Heddon please give his reasons for using only 8 frames? 5. Would you recommend a hive with a permanent bottom and portico? A. S.

Newark, O., Feb. 24, 1883.

1. Not if you will put a proper amount of wood in the top bars of the frames, which I do, and prefer to the tin posts.

2. Not necessarily so; the law only requires that they shall be divided from the fingers of the mail agents, by double wire screens, with spaces between.

3. Not, in my judgment.

4. My reasons for preferring 8 to 10 Langstroth frames as the brood chamber of a colony, in brief (stripped of argumentive proof) are these: First, the capital rests in the combs, etc., and not the queen, since I want all that capital used to its utmost, and automatically so. Smaller brood chambers tend toward up-stair work in a potent degree. Narrower brood chambers (that is, fewer combs) are better for wintering.

5. After having used hives, in quantity, that had both permanent and loose bottom boards, and those with and without porticos, I prefer and use those without porticos, but always want my bottom boards permanent. Mr. Langstroth gave arguments in favor of tight bottoms, that, as yet, I have not seen satisfactorily controverted. My experience seconds his views.

Foul Brood, etc.

1. What is foul brood; does it, or can it proceed from chilled brood? 2. Would bees, that were healthy and clear of the disease in May, die of the disease by September following? 3. If you should take frames of brood from a colony in July to form a nucleus, and the old colony die in the fall, and the following fall you find that the nucleus has the foul brood, and no others in the apiary have it as far (as could be seen), would it not be very strong proof that it came from the frames forming the nucleus? 4. If there were no bees, either domestic or wild, within 4 or 5 miles, would there be any probability of bees, so situated, becoming affected from bees outside, and die in the same season?

5. Would you consider it square-dealing to sell a customer Langstroth improved hives and deliver the Simplicity, American, or any other instead ?

6. Is it safe or prudent to try D. A. Jones' foul brood cure, before the middle of May, in this latitude, or until past freezing ? Do you prefer it to any other way ? I expect I have other colonies that may need to be treated for that disease in the spring, and you will confer a favor by answering these few questions through the BEE JOURNAL, with which I am so well pleased. O. B. SCOFIELD.
York, Maine, March 5, 1883.

1. I have never seen a case of foul brood. I suppose it to be a bacterious disease of the brood, and do not think it is caused by chilling at all. I know that chilling does not cause it alone.

2. " Bees " never die of or have the disease. It is a disease of the "brood ;" it is not foul bees.

3. Yes ; if the old colony had the disease, I should not expect such results.

5. Perhaps the Simplicity may be called, by some, an improved Langstroth, but I think it a degenerated Langstroth hive. However, I can see no reason for advertising the name as well as the kind of hive, where the name is so well established and known. Of course, it would not be right to send an American hive when a Langstroth was ordered.

6. I would rather wait till they fly, and draw out comb foundation for the new combs. I think that the plan of Mr. Jones is the best and most practical piece of advice ever given by him. The plan is in perfect keeping with the laws that I have always supposed governed all bacterial diseases, and not too complicated to be profitable to one who has many colonies affected.

Convention Notices.

☞ The Central Michigan Bee-Keepers' Association holds its spring convention at Lansing, in the State Capitol building, on Tuesday, April 17, 1883, 9 a. m. Programme : President's address ; Essays : Prof. A. J. Cook, on Wintering Bees ; S. C. Perry, on Chaff Hives ; C. Case, on Comb Honey ; O. S. Smith, on the Best Bee ; A. D. Benham, on Extracted Honey ; Mr. Harper, on Queen-Rearing ; Mr. Waldo, on Best Method of Wintering Out of Doors, in Single-Walled Hives ; E. N. Wood, on Sections ; and E. Greenaway, on Comb Foundation. All bee-keepers are invited to attend or send essays, papers, implements or anything of interest to the fraternity. A full attendance is requested.
E. N. WOOD, *Sec*
North Lansing, Mich.

☞ The Eastern Michigan Bee-Keepers' Society, will hold its annual meeting in Detroit, April 3, in Abstract Hall, commencing at 10 a. m. The following subjects will be brought up for discussion : What is the best means of extending the honey market? At what price can honey, either comb or extracted, be afforded ? Is there danger of over-production ? Has glucose affected your market, and if so, how ? What is the best test for glucose ? In judging queens, what points are to be considered, and what is the order of their importance ? Foul brood, and its prevention and cure. An interesting meeting is expected.
A. B. WEED, *Sec.*
75 Bagg St., Detroit, Mich.

☞ The Western Bee-Keepers' Association meets at Independence, Mo., April 28, 1883.
S. W. SALISBURY, *Sec.*

SELECTIONS FROM OUR LETTER BOX

A Bee Paradise.

What we lack here, to promote great interest in bees and honey, is simply first-class apiarists. Some of our best ones should come here and settle among us, in our most beautiful Shenandoah Valley, which is one of the best places on earth for raising bees and honey. Good crops of honey never fail here, though they are much better some years than others. We want good and true apiarists who will aid others in attending to their bees, rearing queens, furnishing supplies, etc. My apiary, " Bee Cottage," is about 200 yards from my main building, and it is surrounded by a pretty grove of evergreens. This is a great country for bees and honey, but there is not a single first-class apiarist in any of it. E. C. JORDAN.
Stephenson's Depot, Va.

[Here is a fine chance for those who want to escape the rigors of our Northern winters.—ED.]

Wintering Bees in Canada.

I had 3 colonies of bees in the spring ; one Italian, and two blacks ; increased to 9 good colonies, and got 98 lbs. of comb honey, and 12 lbs. of extracted. I have 3 on the summer stands and 6 in a neighbor's bee-house. I looked at them, and all appear in fine condition.
W. J. NORFOLK.
Stratford, Ont., March 12, 1883.

Bees in Splendid Condition.

Bees, in southeastern part of Indiana, have wintered well, so far as heard from. Mine are in splendid condition, although the weather was so changeable. I do not remember a winter as wet as the last. The mercury was 5° below zero to 60° in the shade. J. W. STURWOLD.
Haymond, Ind., March 9, 1883.

Bees Under the Snow Still.

My bees are all under the snow today, and it is still snowing. We have had 116 days of sleighing this winter, and prospects are good for it a month yet. March 1 and 2 were warm and pleasant days, and the bees had a good flight. My 80 colonies all answered to roll call ; no signs of dysentery. J. H. KENNEDY.
Little York, N. Y., March 13, 1883.

Cheap Bee Feeder.

For a handy and simple feeder that costs scarcely nothing, go to the store where they sell cigars, and get the small-sized box, tear out the paper and take a piece of lath and saw it, so that it will fit across the short way of the box, ½ inch from the end, and let it come within ½ an inch of the top of the box and nail fast ; then cut a hole in the small space at the bottom, and run sealing wax all around the corners and the bottom edge, and you will have a feeder not costing much, and as good as any. You can set it on the frames and feed at night, or you can put 4 of them on at once, if you want to. Put a stone or brick on the lid to keep the heat of the bees from warping the lid. For fall or spring feeding it is good and cheap, and any one can make it. March came in warm ; the thermometer on the 1st was 64° above, and on the 2d it was 52°. I took a look through 4 colonies, and found them in fine condition, with brood in three frames. Bees have wintered well in this part of the country. R. P. WILLIAMS.
Goldsmith, Ind.

My Report.

Colonies in spring, 66 ; fall, 121 ; honey obtained, comb, 1,500 lbs.; extracted, 2,500 lbs.; total, 4,000 lbs. Wintering in bee-house, 106 ; out-doors, 15 ; loss in bee-house, none ; out-doors, 5 ; on hand, 116 colonies. Frame used, Roop. 10x10.
C. F. HATHAWAY.
Chelsea, Mich., March 14, 1883.

No Flight Since Nov. 1.

My bees are in the cellar, where they have been since Nov. 1, and they have had no flight since. They are in excellent condition.
EMERY L. FRADENBURG.
Fentonville, Mich., March 15, 1883.

That Iowa State Convention.

I had 23 colonies last fall ; packed 9 in chaff ; put 4 in cellar ; left the rest unprotected ; lost one of the latter, and many bees have died in all the hives, reducing their strength sadly. I hope that some one will issue a call for that State convention at Des Moines. During the State Fair would be a good time. I think that M. Poppleton (being the vice-president of the National Association) is the proper person to call the convention. Iowa has many bee-keepers, but no conventions worthy of the name ; no supply dealers, and is behind the times generally. Let us have a Convention.
Dexter, Iowa. M. E. DARBY.

A Summer's Day.

After having three months of very cold and stormy weather, it was our luck, on the 1st day of March, to have one of the warmest of winter days. Had it not been for the snow in the fields and on the surrounding hillsides, it would have passed for a summer day. The bees enjoyed themselves on their wings from 10 o'clock in the forenoon till after 5 o'clock in the afternoon, and but very few were seen dead upon the snow, after they had had their frolic—it was a general turn-out. Who owns the largest number of colonies of bees in the United States, and how many colonies? Who owns the largest number in the world, and how many? What is the greatest number ever known to have been owned by a single individual? JOHN MORRIS.

Mauston, Wis., March 3, 1883.

[These questions are much easier to ask than to answer correctly. We shall, therefore, not attempt it.—ED.]

Notes from the Nauvoo Apiary.

I began the spring of 1882 with 90 colonies of bees, in average condition, having lost none during the previous winter. Had 6 colonies, pure Cyprians, with imported queens, the remainder mostly pure Italians, many of them with imported queens. The weather was very wet and cold up to July 4th, chilling large numbers of the bees, that left the hive for the fields, and the flowers giving very little, if any, honey, so that I was obliged to feed, up to June 20, to prevent starvation, and to stimulate them to raise brood. It was considerable expense, but I do not regret it, as it kept my colonies strong, and enabled me to reap a rich reward, later in the season. The white clover crop—3,000 lbs. of extracted and 150 lbs. of comb honey—was harvested the first 25 days of July, about one month later than usual. The fall crop began about one week after the spring crop closed, and ended Sept. 20, producing 11,000 lbs. extracted and 550 lbs. comb honey. This makes, for the crop of 1882, 14,000 lbs. of extracted and 700 lbs. of comb honey, together with 135 lbs. of beautiful wax obtained from the cappings. I had an increase of 24 colonies, three-fourths of them by natural swarming. My wife did all of the work of the apiary up to extracting time, when my vineyard and other labors were sufficiently advanced to allow me to turn my attention to the bees. My wife and I did a good share of the extracting, without any assistance. We often took off and extracted 2 barrels (1,100 lbs.) of honey per day, besides returning the empty boxes to the bees in the evening. My bees were put into winter quarters, on their summer stands, during the last days of November. They are packed according to Mr. Chas. Dadant's method, and have wintered very well, thus far. They had a good flight the first three days of last week, and I find that they are all alive and in comparatively good condition; even a very weak colony that was queenless, last fall, for more than 6 weeks, and which I had not time to attend to until the middle of October, when I gave it a queen. My last swarm was hived Sept. 3, and gathered abundant stores for winter, besides producing about 30 lbs. of surplus honey. (Thanks to comb foundation. I may here remark that I would not do without foundation, even though it cost me $1 per pound.) I have been in the bee business, now, 5 years, although I owned but one-half of the apiary until last spring, when I bought the entire stock. I have increased the number of colonies steadily every year, losing none, or next to none, in wintering. Have always wintered on the summer stands. My object is to produce as much honey as possible, therefore, I do my best to prevent swarming, and with good results, finding it cheaper to buy new colonies than to rear them. I expect to buy quite a lot this spring. Although I am engaged in teaching public school, and am obliged to be there every day, Saturdays and Sundays excepted, I have found but little trouble in disposing of nearly all of my large crop of honey, and at good prices, too. Have not dealt with commission men as yet. Our fruit prospects are "blasted" once more, as the vulgar saying is. Surely, this is a cold climate. I am seriously thinking of emigrating South. The only question is to find a suitable and agreeable location.

EMIL J. BAXTER.

Nauvoo, Ill., Feb. 26, 1883.

Wintering and Ventilation.

I see in "Bees in Winter" you mention seven things essential to successful wintering; may I add the eighth? A cleansing flight, once a month. Proof: One and three years ago, they wintered anywhere with that; while two and four years ago (and this), they died everywhere without it. An old bee-keeper said to me, "keep a bee dry and you cannot freeze it." How can we keep them dry, ventilate them properly (much has been written on that point), both at the top and bottom? I think G. M. Doolittle's article on page 52, present volume, is worth the cost of the BEE JOURNAL one year. It is right to the point: "just upward ventilation enough, and not too much." What would be just enough here, one year ago, would be ruinous this winter. That amount of upward ventilation, which is enough generally, would often carry off too much warmth; then the bees eat to keep warm; while, if a little more than just enough is given below, it would not do much harm, as I see. That article refers to A. G. Hill's success and experiments, and, so far, appears good, as per report. (Please report further; also W. Z. Hutchinson on clamp experiments, Geo. Grimm on cellars, and Heddon on out-door or chaff.) But, says one, snow blows in, when on blocks; true, make a hole in the bottom board or let the hive extend over the edge of the bottom board, a little. I often see accounts of bees in clamps, buried or covered in snow, where it is air-tight above, and the bottom clear out (or large entrances), that bees came out in spring strong, lively, and in good order. Why? Because they are dry and warm. Page 69 shows that the air is about as pure near the bottom as at the top. To retain the heat, let out dampness and impure air, and let in pure air at the bottom—is not that better than to let both out at the top, and lose too much heat, and so have the bees eat too much? If much opened above, or they get damp by sweating, the bees soon die, also if too little opened at top. It is always hard to ventilate, upward, "just enough, and not too much."

Limerick, Ill. E. PICKUP.

Zinc for Separators.

My bees have wintered well; to-day it was warm enough for the bees to fly, for the first time this winter. I put them out of the cellar, to give them a flight, and I had a chance to look them over. I found them in splendid condition except one colony, which was dead. I made a mistake in looking them over last fall; I did not notice that it had too much pollen in the hive. That was the only colony that had the dysentery; the rest are all strong and healthy, and I think will come through all right. It has been a hard winter on bees; it has been so very cold. Will zinc do for separators? We can get zinc cheaper than tin. H. J. SMITH.

Burlington, Wis., March 13, 1883.

[Zinc corrodes much more easily than tin, and is, therefore, not desirable.—ED.]

Bees Wintered Well—Never Better.

My 130 colonies came through without loss, and in splendid condition. I have wintered, for 11 years, on an average, about 120 colonies in my bee house, and have only lost two colonies in the whole time, and they died of starvation. My bees never had dysentery, except in nuclei. Cold, bad honey, and the want of sufficient ventilation, are undoubtedly the chief causes of dysentery. The right temperature is about 45° to 50°. My average of honey for the 11 years has been about 80 lbs. per colony of extracted honey. E. C. L. LARCH.

Ashland, Mo., March 12, 1883.

Early Breeding, Etc.

My 40 colonies of bees are all on the summer stands, protected, as in former winters, in Armstrong's Centennial hives, and in spite of the severe cold weather ever since Nov. 27, 1882, till to-day; only 6 days in that time that bees could fly; 8 days in the time it was below zero; one day it was 12° below, and to-day it is 70° above, at noon. I have, to-day, examined my bees, and, strange to say, I found egg larva, young bees hatching, young brood hatched, and some of the hives are full of bees in every colony. Ten colonies have consumed nearly all their honey; so I put capped comb honey in place of empty frames, and I scraped all the dead bees and filth out, which I can very easily do, as I can move the frames in the rear of my hives without taking them out of the hives, and almost without disturbing the bees. My bees are in splendid condition. S. E. Brown has 8 colonies; Robert Stevens has 10 colonies; M. Harneigan has 2 colonies, and John Snyder has 3 colonies, all on their summer stands in good condition, and all Italians but one. They are all in the Centennial hive, protected as mine are. On the 2d and 3d inst. we had the heaviest sleet I ever saw; it did great damage to the Judas trees, willow, peach, cherry, and plum trees. Some ask about the marks of the Holy Land bees? In reply, I say I have several pure colonies of them, and when the weather is warm, it never gets too dark, nor rains too hard for them to meet their visitors at the gate; if you just tap at their door steps, in a moment they will make you acquainted with their natural markings. I have 1 colony that can sting through buck gloves, and I do not see any difference in them and the Italians, in winter breeding. The deepest snow was 6 inches, and the prospects for 1883 are good yet. **R. M. OSBORN.**

Kane, Ill., Feb. 14, 1883.

Some Corrections.

DEAR MR. EDITOR.—I think I am wrongly reported in the matter of "Overstocking," as given by the secretary of the Northeastern Michigan Association. I did not mean to say that it is well-nigh impossible to overstock a locality. In fact, I incline to the opinion that it is quite possible. I only said, or meant to say, that the matter was involved in doubt. That, perhaps, we had been all wrong in this matter. In notice of Central Michigan Association, I am represented as president. The Rev. Mr. Ashworth fills that office, and so well, that to him belongs all the honor.

A. J. COOK.

Lansing, Mich., March 9, 1883.

[We cheerfully make the corrections, but in both cases, we give it exactly as the copy was written. The fault was not ours, therefore.—ED.]

Experience of a Beginner.

I bought 4 colonies of bees and some empty hives of a neighbor who was going away, and put them in my front yard under some apple trees, last spring; on June 7, one swarm came out, and I put it into one of the empty hives, which I had cleaned, and from that time they kept me scraping hives and hiving them, till I had 19 colonies; then in about a week out came another swarm, and having no hive, I put them into a cracker box; before they all got in, out came another, and went into the same box; before they were all in, out came the third, and they also went into the same box; the next forenoon another swarm came out and pitched right for that box, and all went in. Then I had 4 colonies in a cracker box; they killed all the queens but one, and filled the box with honey. I put a 10 lb. box on the top, and that they filled. I had two early swarms that each gave a swarm and stored 60 lbs. of comb honey each. I had from the 4 colonies, spring count, 440 lbs. of comb honey, and increased my stock to 20 colonies. I sold the honey at from 18 to 25 cents per pound. I then sent for the BEE JOURNAL and Cook's Manual. I sold 2 colonies in the fall; united 3 weak colonies, and bought 14 more. I packed one in sawdust, and one in clover chaff on the summer stands; put the other 27 colonies in my cellar; they are all doing nicely, so far. Would a refrigerator be a good place to winter bees in, where it is perfectly dry, has a circulation of fresh air, and will not freeze? Has any one tried it? It strikes me that it would be just the thing. I intend to build one to keep eggs in, through the summer, and I could keep my bees in it through the winter.

W. S. SQUIRE.

Emerald Grove, Wis., March 5, 1883.

Honey Season in Sweden.

The past season here was only a moderate one; not much swarming, generally. I had quite a number of swarms, and consequently my honey crop was proportionately small, only 12 pounds per hive. For the past 2 years I have given my bees plenty of comb foundation, and will increase the use of it, by hundreds of pounds yearly; all other bee-keepers here also commenced to use it liberally; when well made, it is invaluable. The winter came in very early, in the middle of October, and since then they have had no flight; still they are all right, on the summer stands, packed in chaff, and well ventilated in front, half the way down—an essential thing in wintering successfully.

T. G. STALHAMMER.

Gothenburg, Sweden, Feb. 2, 1883.

Bees Carrying in Flour.

My bees have wintered well, and are strong and lively. They are carrying unbolted flour at a lively rate. They have brood in all stages, and young bees taking their first flight. They were wintered on the summer stands. I lost 2 weak colonies that were queenless until late in the fall, and let one good one starve to death. I have 41 colonies, all in good condition, and I have no fear of spring dwindling. Half of them are Syrians.

M. MAHIN.

Huntington, Ind., March 9, 1883.

Bees in Canada.

As far as I can learn, what few bees are kept in this section of country, are doing well, in spite of the severity of the winter. Since they were packed for the winter, the mercury has only once or twice, for a few hours, stood at 40° in the shade, so there has been no chance for a flight, and to-day, Feb. 26, old Boreas is roaring away as if his strength is not nearly all expended yet. I have 9 colonies in a bee house, all doing well, as far as I can judge, though the temperature has not kept as high as I would wish, being from 34° to 38° most of the time. Two colonies are out of doors in the Jones, wintering hive. In one of these the bees are so quiet I should suppose them to be dead, if I did not know to the contrary, and this colony has lost very few bees apparently. The other colony seems uneasy and noisy, and many more bees have died in the entrance and bottom of the hive than with the others. I wonder what causes the difference, as they are packed alike, and the entrances of both have been protected from drifting snow by small boxes set up in front. The first sunny day I shall try giving the uneasy ones a flight, by putting a large box over the entrance with a glass sash sloping like a hotbed frame. I highly approve G. M. Doolittle's suggestions as to the way to use the BEE JOURNAL, and another time will tell you how I keep mine without the expense of binding.

HENRIETTA F. BULLER.

Campbellford, Ont., Feb. 26, 1883.

Fastening Comb Foundation.

The subject of inserting foundation comb has been very perplexing to many, though it seems so easy to me, and one of the least of the troubles with which I have to contend in bee-culture. The method I have adopted, I have used for 4 years, and is a success in every particular, and far superior to any I have seen or read of. For the benefit of the numerous readers of the BEE JOURNAL, I will try to give a brief description: I use a tunnel, about 3 inches in diameter, and, say, 4 or 5 inches long (that is the cylinder), with an abrupt tapering off to about ½ inch, then a long, slim tapering (say 5 inches) to a point, only leaving a small hole, say, 3-16 of an inch. The top has a circular handle made of tin, with an opening, through which a wire, bent with openings to admit a finger, by which it is regulated, and said wire passing from the hand (top) entirely to the bottom, closing the hole, from which, when lifted, the melted wax, contained in the tunnel, flows, and is thus moved along the line where the comb is to be attached to the frame, thus welding it solid. The comb is, of course, joined, placed in the inverted frame, with a cross-bar, cornerwise, just to steady it, during the operation. I can set foundation comb of any width in 100 frames, perfectly, in less than 20 minutes "by the watch," and it will sooner break somewhere else than come loose from the frame.

Elroy, Wis. **D. C. TALBOT.**

My Bees All Right.

My 21 colonies of bees came through the winter without the loss of one. They commenced brood-rearing on Feb. 7; brought in pollen on the 21st, and have been at it ever since, except a few days. We had a light frost on March 6, which stopped the bees a day or so. I was looking over some of my colonies to-day, and found hatching brood and some sealed drone comb. Fruit trees are in bloom, and bees are doing finely.

MARVIN M. BINKLEY.

Sherman, Texas, March 12, 1883.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1 year, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with $6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For four subscribers, with $8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with $10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., March 19, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The nominal price of extracted is 7c. for dark and 9c. for light—here. The supply is abundant and sales are slow.

BEESWAX—It is quite scarce. I am paying 30c. for good yellow wax, on arrival; dark and off colors, 17@25c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—There is no excitement in the honey market, but sales are fair to our regular trade. Offerings are plentiful of extracted and comb honey. Extracted brings 7@9c. on arrival. The sales of comb honey are very slow, although there is a large supply of first-class quality on the market. It brings 12@18c. on arrival.

BEESWAX—Comes in slowly and brings 20@30c. per lb., according to quality. CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The past month has not reduced the stock of comb or extracted honey, the receipts having been larger than the amounts taken for consumption. Prices are weak and irregular, ranging from 16c. to 18c. for white comb in the smaller frames; dark, very little selling, offered at 12½c. to 14c. Extracted, 8c. to 10c., according to color.

BEESWAX—32@33c. per ℔. for good.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—The market is dead and prices are nominal. No choice qualities are offering.

White comb, 14@17c.; dark to good, 11@13c.; extracted, choice to extra white, 8½@9½c.; dark and candied, 5@7½c.

BEESWAX—We quote 30@33c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Very quiet; dull. Comb at 14@16.—some inferior sold at 10c.: strained at 6½@7c., extracted at 7½@8½c., lots in small packages more.

BEESWAX—Scarce and wanted at 32@33c.

W. T. ANDERSON & Co., 117 N. Main Street.

CLEVELAND.

HONEY—Is very slow, just now hardly anything selling, stock on hand quite liberal. Sales slow at 19@20c. for best white 1-lb. sections; 18@19c. for 2-lb. Second grades not inquired after. Extracted very dull at 9@10c. in bbls. and 11@13c. in cans.

BEESWAX—Scarce, 28@30c.

A. C. KENDEL, 115 Ontario Street.

NEW YORK.

HONEY—The prospect is very poor for selling honey in this market. I think there is all the honey here that will sell this season, unless it sells faster during the next month than it has this.

BEESWAX—There is only a moderate supply of beeswax and prime lots held firmly.

Western pure, 30@32c; southern, pure, 31@33c.

D. W. QUINBY, 105 Park Place.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—Our supply is gone; we have none to quote.

CROCKER & BLAKE, 57 Chatham Street.

☞ Dr. H. Besse has sent us a sample of his wooden separators. They are very nice.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

COMB FOUNDATION.

Owing to the scarcity of beeswax, the prices of comb foundation will hereafter be as follows:

	Dunham.	Thin.	Extra Thin.
10 lbs. or less.	55c.	65c.	72c.
25 " " ..	54	64	71
50 " " ..	53	63	70
100 " " ..	52	62	69

ALFRED H. NEWMAN.
923 W. Madison St., Chicago, Ill.

BEES FOR SALE!

Having wintered my bees safe, I will spare 10 or 12 Italian colonies, in Langstroth hives. New queens, but purity not guaranteed. 1 to 3 colonies, $10 each; 4 to 6 colonies, $9 each; 7 to 10 colonies, $8.50 each; 12 colonies, $100. In shipping boxes, $1.50 less for each colony. Address

R. M. ARGO,
14BC1t Paint Lick, Ky.

WOOD SEPARATORS!

PRICE LIST of the Besse Wood Separators: For the wide Langstroth frame, per 100, 50c.; per 1000, $4.00. They are of basswood, size 17½x3½x1-16. Any size to order. Send 3 cent stamp for sample.

12A3t DR. H. BESSE, Delaware, Ohio.

BEE KEEPERS' SUPPLIES!

Simplicity and Chaff Hives, Queens, etc. Send for Circular. Address,

HOWARD NICHOLAS,
12A4t 4B1t Etters, York Co., Pa.

FARMS Wanted for Eastern buyers. Stamp for information. S. P. BROCKWAY, Times Building, Chicago, Ill. 12A4t

100 COLONIES ITALIAN BEES,
FOR SALE,

also, queens and nuclei. Will exchange for Jersey heifer, pair Poland China pigs, or Plymouth Rock fowls. Write for prices.

C. WEEKS,
11A4t Clifton, Wayne Co., Tenn.

FOR SALE. Colonies and Nuclei of ITALIAN BEES, QUEENS, Extractors, Bee Books, and Supplies. Address, OTTO KLEINOW, opposite Fort Wayne, DETROIT, Mich. 11AB3t.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

10AtfB1 J. VANDERVORT, Lacyville, Pa.

1883. Colonies, Nuclei and Queens 1883.
FOR SALE CHEAP.
For terms, address
S. D MCLEAN,
10D4t3B1t COLUMBIA. TENN.

(ESTABLISHED 1864.)

BEE-SUPPLIES.

We furnish EVERYTHING needed in the Apiary, of practical construction and at the lowest price. Satisfaction guaranteed.

Send your address on a postal card and we will send you, free, our large, illustrated catalogue.

E. KRETCHMER, Coburg, Iowa.
11A2t4B1t

1883. 1883.

YOU GET VALUE RECEIVED!

QUEENS, BEES AND SUPPLIES

If you want EARLY QUEENS from the best improved genuine stock for business; or if you want Imported Italian Queens or bees, in full colonies or nuclei, with tested or untested queens; if you want Dunham or Vandervort comb foundation, made from pure beeswax; or if you want hives or apiarian supplies of any kind, send for my new catalogue. It tells you about introducing queens, new "Races of Bees," etc. Cash paid for clean beeswax. Address,

J. P. H. BROWN.
5BD15t Augusta, Georgia.

THE NEW IMPROVED
STEAM POWER
Comb Foundation Factory
CHAS. OLM, Proprietor,
FOND DU LAC, WISCONSIN.

Best work and pure beeswax is warranted.
Send for Sample and Circular. 8Dtf

CUT THIS OUT And Return to us, with TEN Cents, and you'll receive by mail, a Golden Box of Goods, that will bring you in more money in One Month than anything else in America. Absolute Certainty. M. Young, 173 Greenwich St., New York.

OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

VOL. XIX. CHICAGO, ILL., MARCH 28, 1883. No. 13.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

"Rational Bee-Keeping."

On account of the crowded state of our columns during the past month, we have not been able to find room to notice or review the new book of the great German bee-master—the Rev. Dr. Dzierzon. We will now very briefly do so.

The work contains 350 pages, and is handsomely printed on good paper, with nice, clear type, and will be read with a great deal of pleasure. The author, in his preface, remarks as follows: "The theoretical part has been treated but very briefly, and with special regard to practical bee-culture—the author's aim being to show how to keep bees rationally and profitably, and at the same time to enable bee-keepers to satisfy themselves and others as to the reason for the different operations in their apiaries; *for he only is entitled to be called a rational bee-keeper* who clearly comprehends *why* a thing is done in a certain way, and not in any other, and who is able and gives the reason for everything he does."

Concerning foul brood, the Doctor remarks as follows: "It is well known that, recently, salicylic acid has been recommended as a remedy for foul brood, the most dangerous of all the diseases of bees, and the method of treatment has been made known by Mr. Hilbert. Formerly, he advised spraying with diluted tincture of salicylic acid, but more recently he advises fumigating with refined powdered salycilic acid, strewed on a metal plate and heated over a flame. Since this treatment is much simpler than the repeated spraying of the separate combs, and is applicable even to hives with immovable combs; the author thought it ought not to be left unmentioned."

The Doctor devotes 8 or 10 pages to a description of this dreadful disease, its symptoms and cure.

This great bee master strongly advises providing bees with pasturage by planting for honey, and speaks of the many uses to which honey can be devoted—making pure wines, metheglin, honey cakes and pure sweetmeats—instead of depending on adulterated and poisonous wines and sweets; and he adds most confidently: "There is no need, therefore, to be anxious about what is to be done with honey, even if the pursuit of bee-culture becomes more general and good bee seasons set in. At a moderate price, there will, even then, be no want of a market."

The book is the master-piece of a master mind, and should be in the library of every bee-keeper. The world has produced but few such intellects as that with which the Doctor is endowed. He is now the greatest living authority on bee-culture. To him, and the late Baron of Berlepsch, we are indebted for much that is now known in the realm of scientific and progressive apiculture.

We made his personal acquaintance in Germany in 1879, and though there were, at that Congress, the master spirits from nearly all the world, he was infinitely above all; and, to him, they all appeared to look for inspiration. He was, and still is, the great living Father of Bee-Culture.

☞ The *Courant*, Berlin, Wis., remarks as follows: "Every bee-man should take a wide-awake bee-periodical, and the AMERICAN BEE JOURNAL of Chicago, is essentially that."

☞ Articles for publication must be written on a separate piece of paper from items of business.

New Catalogues and Price Lists.

We have received the following new Catalogues and Price Lists of Bees, Queens or Apiarian Supplies:

B. F. Carroll, Dresden, Texas.
S. D. McLean, Columbia, Tenn.
Geo. W. Baker, Lewisville, Ind.
T. S. Hall, Kerby's Creek, Ala.
W. S. Pouder, Groesbeck, O.

SEED CATALOGUES.

J. W. Manning, Reading, Mass.—Fruit Trees and Shrubs.
J. H. Walker, Worcester, Mass.—Jersey Cattle.

☞ Several bee-keepers of Eastern New York have written to us expressing their disgust at the resolution of the Albany Convention on the BEE JOURNAL. Among them, several of those present, including officers of the convention, who say that the matter was persistently forced on them, by the chairman, who, because some opposed the matter, left the chair in high dudgeon, and then was more highly incensed against the BEE JOURNAL than ever. The convention could hardly have acted more unwisely, or done itself more discredit, than to have been so foolish as to pass its insane resolutions.

☞ The Lanark, Ill., *Gazette* pays this compliment to a well-known bee-keeper: "Mr. F. A. Snell, of Milledgeville, Ill., has the reputation of being one of the best bee-men in this section of the State."

☞ Mrs. Lizzie Cotton's circular is again sent us, showing that she is still looking for investors in her bank, this time it is sent by Mr. Will, of Bloomington, Ill., who writes on the margin: "What do you think of this?" It is the old story; those who do not wish to lose their money, should heed the many warnings already published, from those who can get no returns (or some "worthless" hive) for their wealth sent to her.

CORRESPONDENCE

For the American Bee Journal.

What Shall I Feed My Bees?

ARTHUR TODD.

This question, as spring opens, will interest many bee-keepers. Some will simply seek to feed to keep alive those colonies that have not stored enough to last until plenty reigns. Others will feed to stimulate the mother bee to active egg-laying, and so, early in the season, have strong colonies. It is to the latter that these remarks are more particularly addressed. I purpose taking it for granted that those I address concede the principle of supplying their bees a spring feed of some sort, with a view to practising this cardinal virtue in bee-keeping, viz.: "Keep your colonies strong." I purpose to point out certain substances that may be employed, and the manner of so employing them, that remarkable results may be obtained by those who chose to give the matter of intensive feeding their careful attention, this spring.

This spring feeding is a sort of mild deception, played upon the mother bee, for feeding being once regularly entered upon, the bees get daily more active, and, literally, force food on the mother bee, making her believe that the time to be "up and doing" has arrived; a little earlier than usual, she may think, but still it has come. So, as long as the workers keep on assuring her that spring has arrived, she deposits the eggs which are to be the groundwork of the success of her colony.

Now comes in the question, "what shall I feed that shall induce those worker bees to overfeed the mother bee, and force from her a supply of eggs, equal, if not greater than it would be at the most favorable natural period of the year. As spring opens, we see carried into the hives, first, that substance called pollen, obtained from flowers. It is now known that bees eat pollen, and, moreover, feed it to the young, growing bees, hence its old name of "bee-bread." That pollen is eaten, the microscope proves, in the hands of a Scotch authority, who writes: "When I examined the excrements of bees, even when no brood was being raised, I found them largely consisting of the indigestible husks of the pollen grains."

Now, food is of various kinds, but all the constituents of food must be capable of assimilation by the animal eating thereof, and each constituent must go to repair a definite waste in the animal organism. In animal organisms we have three distinct classes of substances, viz.: mineral, non-nitrogenous, and nitrogenous. All foods may be classified as follows: Mineral—carbonaceous or respiratory (generally called heat givers); nitrogenous or nutritious (generally called flesh-formers).

All foods are principally composed of the chemical elements known as carbon, oxygen, hydrogen and nitrogen, combined in varying proportions. Under the head of mineral we class water, salts and ashes. A large proportion of all animals is water, and of this element of food a supply is required to replace loss by evaporation, and for the changes food undergoes in the body, while being dissolved, and made assimilable. What we know as salt, and the salts of various minerals, are of great service in facilitating the absorption of water, and building up the framework of the body.

The heat given from the non-nitrogenous portions of animals—starch, sugar and fat, are examples. These are highly carbonaceous, and, when taken into the animal system, there unite with the oxygen, and a slow combustion takes place, evolving what is known as "animal heat;" portions of these carbonaceous materials undergo various changes and are laid up in a solid form in the shape of fat in the animal body.

The flesh formers, or "nutritives," from the nitrogenous portions of animals—albumen, fibrine and caseine are examples. These all contain nitrogen, the element absolutely necessary to the growth and formation of organic tissues, by which all muscular force and nervous force is brought into action—bones, hair, skin, nerves, all require nitrogen to form them, hence the term "nitrogenous food."

Albumen is required by all egg-laying animals. Albumen is that form of nitrogenous food that goes to form nerve substance, and it is through and by the nerves, all animals are put in relation with the world exterior to themselves. By the nerves the senses are governed. Fibrine is found in the blood of all animals, and it constitutes the whole of their muscular tissue. Locomotion, whether by leg or wing, must spring from the presence of fibrine. Caseine is that substance which we separate from milk under the name of cheese, and is an essential of food. These elements of food are all to be found in the vegetable world, and it is plants that have the power of converting inanimate mineral substances into the necessary vital products of the whole organic kingdom.

At the opening of the year, bees have to provide for the animal heat necessary in the hive, the albumen necessary for eggs, and the growth of animal tissue in the young larvæ and bees. Water (often impregnated with salts of the various minerals) is generally in abundance and easily obtained. To the vegetable world the bees go to obtain those heat givers and flesh formers I have mentioned.

Let us return to pollen and analyze it. Analyzed, it shows, in 100 parts:

Water	12.74
Ash	2.72
Albumenoids	21.75
Sugar	26.20
Nitrogenous organic substances	36.59

By this we see, pollen contains a portion of sugar essential to the production of animal heat, but the albumen and nitrogenous organic substances are *there* in large quantities.

Egg substance being composed of one-seventh pure albumen, contains, as already shown, "nitrogen," and the poor, mother bee, from whom we want to force some 3,000 eggs per day, must be fed nitrogen in ample quantity. From these eggs come the larvæ and bees, all in a state of growth demanding supplies of flesh-forming and nerve-forming food. These albumenoids and nitrogenous, organic substances, shown to be contained so largely in the first food the bee seeks in spring, *are*, as you can now readily understand, the most important to supply. "Nitrogenous food," therefore, is the answer to the question, "what shall I feed?"

The seeds of plants contain, in a varying degree, these flesh-forming or nitrogenous foods, and this is why artificial pollen, in the shape of pea, rye, barley, oat and wheat flour, has long been used in the open air as a spring stimulant, only, however, available on open, sunny days. Comparatively few have known the actual reasons why bees will take one kind of flour in preference to another. It is simply because there is, in some, a higher percentage of the nitrogenous element than in others. Rainy and windy springs, which prevented the bees from getting to the artificial pollen, gave stimulus to invention, and, at last, it came to be fed *inside* the hives, where brood-rearing could go on uninterruptedly, in all weathers.

The Germans long ago decided that there is an advantage to be gained by speculative, nitrogenous feeding of bees in the interior of the hive. In the spring of 1878, a German reports having obtained the most favorable results, and stated, that in his neighborhood, such was the miserable weather (cold winds, etc.) that not ten per cent. of swarms were reported, yet those who, including himself, fed the bees with flour inside the hives, increased their colonies 50 and 100 per cent. and had very good harvests of honey. Another renowned bee-keeper reported like good results. Scotch bee-keepers have long been stimulating in spring, by means of cakes, composed of rye flour, honey, etc. The composition of these cakes having been communicated to the Swiss Bee-Keepers' Society, that Society went to work in a very practical manner, got a baker to make the cakes, and ever since they have regularly advertised in the Swiss bee paper, "cakes of sugar, with or without flour."

In *Gleanings*, p. 249 (1882), we read: "*A new substitute for pollen—cotton seed meal.*—We have made a discovery which may be new; it is in furnishing bees material for pollen, they leave oatmeal, rye meal, and everything else for cotton seed meal, and they act as though they were perfectly happy with it, rolling and tumbling over each other in their eagerness. It may be the sweetness of the cotton seed meal that makes it so attractive to the little beauties. Please give us your opinion.—H. A. WILLIAMS & CO."

Again in *Gleanings*, page 302 (1882). "*Cotton seed meal again.*—My bees prefer cotton seed meal to any other substitute for pollen.—D. S. HALL."

Mr. Root remarks: "If I am correct, cotton seed meal has once before been mentioned, but if it is really a fact that bees take it better than oats or rye, it might be well to offer it for sale. Who will tell us what it is worth?"

I was sorry to see Mr. Root make no effort to fathom the reason why cotton seed meal is preferred to any other meal, his only idea seemed to be to find something to sell. The opportunity for teaching was there offered, and thrown away. Had Mr. Root investigated the point raised, he would have found that the proportion of nitrogen in cotton seed meal, to that in other meals, is as follows:

Cotton seed meal	contains	6.50	per cent.	nitrogen.
Linseed cake meal	"	4.75	"	"
Bean meal	"	4.00	"	"
Pea meal	"	3.40	"	"
Oatmeal	"	2.00	"	"
Wheat meal	"	1.80	"	"
Indian meal	"	1.80	"	"

The wonderful instinct of the bee, therefore, guides it to select the food, that analysis shows contains the most "nitrogen," and, therefore, for open-air stimulation, when the weather is favorable, the substances, as in order named, will be found the best appreciated.

For intensive feeding, in the inside of the hive, there are many highly nitrogenized substances that may be employed to advantage. On some of these I experimented years ago, and I will now, having proved, I hope, the value of nitrogen as a bee food, mention some substances that may be employed, and methods of preparing the same.

Herr Weygandt (of Germany) prepared his bee food thus: "Take 1 pound of wheat flour, adding thereto either some salt or a little wine, then with water make this into a batter, by mixing carefully to avoid limpiness. In another vessel put 2 pounds of sugar (or if honey, 1½ lbs.), and mix this up in 1 or 2 quarts of water. This latter is now intimately blended with the batter, when it is ready for feeding." This food can be given thus or boiled. I gave it to my bees unboiled, and can testify to its ready acceptance by them.

My advice is to feed it by pouring over an empty comb, and hanging that, thus filled, in the hive. The bees suck up all the sweet liquor first, and a portion of flour remains in the cells, which they continue to dig away at, and, by degrees, carry it all off. It is best to do all feeding at night, then, if the morrow prove fine for flight, those bees, that can, will go out after the natural supplies.

Mr. Raitt (Scotland's most advanced bee-keeper) writes thus: "Three years ago a Highland lad told me his grandmother used to give her bees a barley bannock (or cake of barley meal), soaked in honey every spring, and that the bees ate all but the skin; this was the very idea I was waiting for. I had previously given meal in the open air; now I should try it in the hive. My bannock disappeared, and as soon as the bees began to eat it, brood appeared. Now, when I want breeding, I make easily dissolved candy cakes, with, perhaps, one-fifth of flour, or pea meal, in them, and as certainly as I give them, they disappear, and brood appears. The bees cannot store away such pollen; they must utilize it somehow or other. They over-feed the queen, and she lays. They go on brood-raising in all weathers."

Of highly nitrogenized foods there are two, viz.: Eggs and milk, which I experimented with. In milk we have all classes of simple alimentary principles and substances together. It being composed of water, compound of chlorine salts (caseine), fat and sugar, whilst the egg contains six of the alimentary principles, viz.: Carbon, hydrogen, oxygen, nitrogen, sulphur and phosphorous; all easily soluble and assimilable.

All concentrated foods are difficult of digestion, and so we supply a condiment to assist digestion, in the shape of common salt, either added to the prepared food, or dissolved in drinking troughs.

The milk food I prepare thus: The milk is first boiled as soon as possible after being milked, the clot removed, and then, if sugar be used to sweeten it, a pound of sugar is dissolved in each quart of milk. If honey be used, the milk must become cold before the honey (a pound to a quart) is added, and it must not be warmed again. Boiling prevents souring, and coagulates the excess of fatty matters which would be indigestible, and is best removed. In the milk of asses we find a poverty of fatty matters, and an abundance of sugar. Those who keep those interesting and intelligent animals will, I hope, take the hint, and feed their bees with their milk, and report results.

The egg-food I prepare thus: When a sufficient number of eggs have been broken into a basin, they are well whisked, and honey added in the proportion of double weight of honey to a given weight of egg substance. To eggs I have likewise added a sugar syrup made of 7 pounds of sugar to 4 pounds of water. This milk, or egg food, I used to give at night in tin or glass dishes, either inside of the hive or just at the door, the quantity being regulated by the size of the colony. The milk-food I gave every night, and did not observe any ill effects. The egg-food I used to give for two nights, and allow the third to pass without any. At each feeding, I gave what I considered adapted to the strength of the colony, increasing the quantity as it grew in numbers. Bees will store milk-food if allowed, so I took care to give only what they would consume.

I was interrupted, in a course of experiments I was about making as to the relative advantages of feeding the white of egg (which is pure albumen) only, or the entire egg. The entire egg contains a great deal of oily matter, sulphur and salts, the effect of which I had not time to note. Some colleague will, I hope, experiment further this spring.

In 1879, I wrote to a journal as follows: "The results are simply these, that by the above means you can start the queen laying at any moment, and as fast as the bees hatch out strong enough to cover the brood, every cell of a fresh frame of empty comb you insert will be found to contain a freshly laid egg. I have one colony fed on milk-food only; six weeks ago it contained simply the queen and a handful of bees; they now cover four frames, having built out their comb from Raitt's foundation, and are busily engaged on a fifth. One noticeable fact is, that whereas those particular bees were weak and puny, never showing fight, the present generation are large, strongly developed bees."

From scientific investigation it would appear that the bees assist the mother bee's digestion by feeding her half digested, or chymified food, and thus convey into her system a larger amount of substances that go to form the eggs, than her unaided digestive organs could accomplish.

There are, however, two sides to every question, so I join my warning to that of the German bee-keepers, from whose writings I learned so much, quoting the words of Carl Zwilling, a noted Alsace bee-keeper: "Although there be apiaries at Luneburg of 60 colonies, which, by speculative feeding increased, last year, to 300, it must not be forgotten that the men who did this are old hands at the work, that they know how to prepare not only the food, but the colonies to pass the winter, and the *when* exactly to apply the artificial food. All goes well if the bright, spring sun and mild weather favor the bees in their daily excursions, but if, with a bright sun, there should be sudden gusts of wind, or sudden rain storms, then the bees, tempted out of doors by the thought that the constant supply of nectar comes from the fields, instead of from man's hands, are caught, and chilled, never to reach that hive again, where the animal heat generated by each one is so much needed. A hive in this way may be quickly depopulated, and the brood be chilled."

Personally, I had ample proof of the wisdom of these remarks (and, if again feeding bees on nitrogenous diet, would place a wire gauze door to my hives, movable of course). Then, if windy weather sets in, with bitingly cold blasts, I would keep the door covered by the wire, shade all light off and keep the bees prisoners until the weather again became favorable; being careful, however, to see that the bees are not crowded for room, so that no danger from suffocation would arise, if they became excited on finding themselves prisoners.

I trust I have now, in some measure, answered the question, "What shall I feed my bees?" I assure you, I have but skimmed the surface of this most interesting subject. It is one well worthy of close and diligent study, and I hope some colleagues will experiment a little this spring, and, later on, give us the benefit of their experience. If I have, in any measure, suggested "food for thought," I shall be well pleased.

Philadelphia, Pa.

[The above was read before the Philadelphia Bee-Keepers' Association, at a meeting held Feb. 12, 1883, when the following resolution was unanimously passed :

Resolved, That this Association recognizes, in the communication read this evening by Vice President Todd, entitled "What shall I feed my bees ?" many points of great interest to bee-keepers generally, and hereby request the vice-president to furnish the Secretary with copies for publication.

He did so, and the secretary, Mr. F. Hahman, Jr., has sent us the above, which, we think, a very valuable and scientific article, and one that will be read with much more than ordinary interest.—Ed.]

Northern Ohio Convention.

The second annual meeting of the Northern Ohio Bee-Keepers' Association was held in Norwalk, O., Feb. 15, 1883; the meeting was called to order at 11 o'clock a. m., by President Samuel Fish, of Milan. Minutes of the last meeting were read and approved. The Society has over 40 members. The election of officers was postponed until the afternoon.

The first subject discussed was "The size of sections." Mr. Fish said, he was opposed to adopting any smaller sections than those now in use. While there might be a slight gain in price, in favor of the small section, such gain was more than balanced by the loss in the amount of honey stored. Mr. Hoyt was opposed to the use of small sections on account of the small difference in price between honey placed on the market in small and large sections. He said, however, that he was not yet satisfied in his own mind, which size was most profitable. W. H. Cole said, the larger the section the faster bees would store honey. He did not think that honey would sell for enough more in small sections to make up the difference in loss of the amount of honey gathered. He would not use the half-pound section under any circumstances whatever. Mr. Hurlbut said, that in his experience there had been no difference in the price of large and small sections. Mr. Gauff said, that his success had been, by far, the best with large sections. He thought that bees would store, at least, one-half more honey in two-pound sections than in one-pound. Mr. Sanders thought the use of small sections was like fencing a farm into small lots. It took too much time to do the fencing. It took the bees too much time to make the wax for the small sections. Mr. French had not had much experience. He had all his comb honey stored in sections, that would hold 5 or 6 pounds each, and sold it all at home, at a fair price. Mr. Darling said, the sections best adapted to the general market were the ones to adopt.

The majority of the members of the convention were in favor of using a medium-sized section, one that would hold about 1¼ pounds.

Adjourned to 1:30 p. m., when the following were elected officers for the ensuing year: President, Samuel Fish, Milan; Secretary, S. F. Newman, Norwalk; Treasurer, Joseph Gibbs, Norwalk.

After the election of officers, the president delivered the following address:

It is now one year since this Society was organized. Our meetings have all been pleasant and, I hope, instructive. It is pleasant to meet with old friends as well as to make new ones. As we know each other better, our ties of friendship will grow stronger and stronger. Bound together by our common interest in bees and honey, we may well greet each other with a smile and hearty congratulations. Anything that increases our knowledge of the honey bee and its ways and methods of working, or in anyway increases the amount and quality of its productions, has real permanent value. An association which brings the bee-keepers of a community together and diffuses useful knowledge in respect to their calling, deserves our kindest attention and should be promoted.

The past season has not been one of the most profitable on account of the unpropitious weather; but we should not be disheartened. No, certainly not. We should have no disposition to give up. Does the failure of a crop of wheat, or corn, or potatoes cause the farmer to leave the farm ? Such reverses seem only to stimulate the farmer to more energetic courage. Men to succeed in anything must focalize their energies, and learn that honest industry will be rewarded.

I wish to call the attention of this meeting especially to section honey. Bee-keepers who succeed the best are those who get the most honey from their bees. Most of us, I believe, use the Simplicity hive. The sections are placed in this hive in wide frames with separators. Is this the best plan ? Are separators actually a necessity ? Is there no way by which they can be abolished and still get honey in merchantable shape ? If we can get 3 pounds of section honey without separators, while now we are getting but 2 pounds with them, we are certainly losing too much. If separators are necessary, would it not be better to discard tin ones and use something else ? Some are having success with wooden ones. Bees certainly do not want so much cold metal near them, when they are making comb. Separators cost too much.

After-swarming is another trouble that bee-keepers are afflicted with, especially those who have bees enough already and want a good crop of honey. We all understand that, when bees once get the swarming fever, they abandon the surplus boxes, and we seldom get any more honey from them during that season. We have all felt this very keenly. At one of the conventions in the West, not long ago, the question was asked, "Can swarming be prevented ?" and it was answered by Mrs. Harrison, a lady bee-keeper of Illinois. She said, "when you can prevent bees from swarming, you may, perhaps, also find out how to prevent the human family from increasing. It cannot be done." As a rule it is best for a colony of bees to cast one swarm, and only one, but the trouble is to prevent it. I have controlled them somewhat by cutting out the queen-cells, but that is not a sure remedy. James Heddon says he does not believe in cutting out all the queen-cells but one, and then expect that one to give the future queen with the best results. A writer in the Bee Journal claims he has accomplished this, and gives his method, as follows: "If this inordinate desire to swarm is manifest, there is still a way to satisfy the bees without lessening the working force in the hive. If the bees seem determined to swarm, usually there are several cases; if there is one, let the first swarm be placed in a new hive. When the second swarm—I refer to a swarm from some other hive—comes out, it will likely be on the same day; put this in the hive that swarmed first, after having destroyed all the queen-cells in the hive. This colony is just as strong now as it was before, in brood and bees, and the bees will be satisfied to settle down to work in the sections. A third swarm can be put in the hive from which came the second swarm; a fourth into the third, etc.

It has been supposed that the carbonic acid produced by the bees in breathing, on account of its being heavier than air, settles to the bottom of the cellar or bee-house. We have been told that it is necessary to raise our hives 10 inches from the floor to keep them from this poisonous gas, and sub-earth ventilation has been largely recommended to run this gas out of the way. The experiments of the scientific board appointed by the United States as a special committee on the ventilation of the Capitol at Washington, after a careful analysis, prove that this gas was quite evenly distributed throughout the building. If there was an excess in any given place, it was near the ceiling. This board of scientific men report it as a gross error to suppose that this gas falls to the floor, for, although when pure it is much heavier than air of the same temperature, yet air expired from the lungs is of higher temperature than the surrounding air at ordinary temperature, and the law of the diffusion of gases prevents any separation. This may seem strange and wonderful, but it is no more so than to have the amount of water in the atmosphere in a clear day, determined for us. Fortunately for bee-keepers, this board of scientists have solved the difficulty in finding the direction taken by the carbonic acid evolved by respiration. The detection of this gas and the amount the air contains requires skill, careful attention, and instruments of much perfection. Among them is one of recent date, the spectroscope. Powerful spectroscopes, in their early days, were used almost exclusively to detect, while in solution, the different kinds of metals and minerals. Quite recently this instrument has been simplified and reduced in size so as to be carried in the vest-pocket; but it is so powerful and true that it will determine for us whether there is moisture enough in the atmosphere to produce rain within the next 24 or 48 hours. We can all see, at a glance, what benefits this little instrument will be to all classes of society, especially to the farmer who wishes to secure his hay and grain in the best condition possible. Bee-keeping of the nineteenth century is not adapted to the sluggard. That day is past. Let us all investigate, in the light of science and experience, as long as we can save one more colony of bees or cause it to produce one more pound of honey.

A vote of thanks was given the president for his able and instructive address; after which the address was discussed by nearly all the members present.

The secretary said, that the only sure method of preventing second swarms was the introduction of a queen immediately after the first swarm had left the hive. Every bee-keeper should have on hand, during the swarming season, extra queens for this purpose. Not only would the successful introduction of a queen prevent second swarms from issuing, but would largely increase the amount of surplus honey. The newly introduced queen would occupy the cells in the brood chamber from which young bees were constantly hatching, with eggs, thereby preventing the bees from storing honey in those cells, and compelling them to store it in surplus boxes above. If the colony from which a swarm has issued is left to raise a queen for itself, it will generally be queenless about three weeks, and consequently would contain about 40,000 less bees during the rest of the season than it would have contained if given a good queen as soon as the swarm issued; for the good queen will lay not less than 2,000 eggs every day during the honey season. Mr. Hoyt said, that he would have young queens to give colonies that had swarmed, if for no other purpose than to prevent the loss in bees that would occur by not having them. Mr. Fish thought that the secretary's plan of introducing queens would not prevent second swarms. It had not, in his experience. The secretary *knew* that it would prevent abnormal swarms. If the second swarm was normal, there was no loss resulting from it.

Mr. Beebe asked how to keep bees in the hives when they were wintered in-doors? Mr. Fish: Bees will not leave their hives if the cellar or bee-house is kept perfectly dark, and at the right temperature. Mr. Mackey said, bees should not be wintered in-doors except in a frost-proof receptacle. Mr. Hoyt: Bees should never be confined to their hives. If they were, for any length of time, they would become uneasy and would collect about the entrance in such numbers as to smother the whole colony.

Mr. Parkhurst asked if anything except bad honey produced dysentery in bees? The Secretary: Long confinement without flying, dampness, cold and hunger sometimes caused bees to have dysentery.

Mr. Hoyt asked how much chaff should be placed in the second story of hives in wintering bees? Mr. Cole: The more chaff the better for the bees. His colonies, which had the most chaff in the cushions above them, were in the best condition. Mr. Fish: When too much chaff is used it is likely to become damp and moldy, and thus cause the colony to become unhealthy. A thickness of 4 inches is sufficient. The Secretary: Chaff cushions should not be less than 10 to 12 inches in thickness. If they were only 4 inches thick they would not retain sufficient heat to keep the colony in a healthy condition. Thick cushions allow the moisture to pass off as readily as thin ones. While it is true that the upper side of a cushion is frequently quite wet, the lower side, which is next to the bees, is always warm and dry. The moisture on the upper side is produced by the warm air from the bees passing through the cushion and coming in contact with the cold air above it. Mr. Cole: Mr. Fish was mistaken; a constant current of warm air was slowly passing through thd cushion and driving out the moisture contained in it, thus preventing it from becoming wet. Mr. Darling: Did not know anything about chaff cushions, but was successful in wintering. His hives did not have upward ventilation.

After a vote of thanks to the City Council of Norfolk for the use of the Council Chamber the convention adjourned to meet sometime during the month of April, 1883; day to be fixed by the secretary.

S. F. NEWMAN, *Sec.*

For the American Bee Journal.

Wintering, Ventilation & Dysentery.

DR. G. L. TINKER.

It has been stated that every plan of wintering fails at times, that what may succeed in one locality, or one year, may fail in another locality, or the next year. All of which, were it true, would be very unpleasant to the investigator, and discouraging to the bee-keeper. But, happily, every effect must have an adequate cause, and if one plan of wintering succeeds in one case, and apparently not in another, it is because the conditions have not been exactly the same. Of one thing we may be certain, that nature does not change her moods, and that, when we shall understand the right way to winter bees, it will be found neither complex, difficult to execute, or uncertain of result.

The great object to be sought in wintering has been well stated by Mr. Doolittle. It is, that we should know, and be able to place our bees in "the most favorable conditions." Beyond this we may not go, but to secure these conditions is to meet with undoubted success in wintering.

The writer has stated that "cold and dampness are the primary causes of dysentery." Now, the causes of this disorder may exist in varying degrees in different cases. We may have dysentery result in one case, spring dwindling in another, or simply, imperfect wintering in others. The affected bees may survive the winter and spring, but not in that vigorous condition which is the evidence of perfect wintering. Thousands of colonies go into winter quarters in fine order every year and survive in this way, the outcome of "unfavorable conditions," and become of little profit to those who own them.

If bees become restless in their hives, and are seen to fly or run out in unsuitable weather, if they become torpid or exhibit signs of abdominal distension, or if, when they do have a good flight, after a month or two of confinement, they spot their hives badly, they have not had favorable conditions, and cannot, therefore, winter perfectly. It is considered a very great mistake to suppose that the bees that are sometimes to be seen coming out of their hives in winter, become chilled and die, are, as has been often stated, only old bees that were about to die. According to my observation, bees seldom fly out when it is too cold, if all is right within the hive, and the old bees are just as good as any, until they begin to take active exercise on the wing.

A colony of bees, wintering in good order, does not become restless, or fly out at improper times. Neither have they occasion to fly out for long periods, since they void their feces in the hive in the form of the so-called "dry powder," which falls to the bottom of the hive. Upon taking a flight they spot their hives only slightly, if at all, and are never seen in a distended condition.

To secure these desirable results it is only necessary that a colony be placed in such condition that it may easily maintain a temperature in any part of the hive outside of the cluster, of not less than 10° Fahr., in the coldest weather, while the temperature of the cluster itself should remain steadily at about 93°, which, from many tests that I have made at low general temperatures, seems to be the normal point in winter. The temperature, just above the bees, in the chaff, should average about 50° or a little above. If from any cause the temperature within the hive should fall much below these points, we shall then get unfavorable conditions, and the effects of dampness at once makes itself apparent.

There is a degree of temperature within a properly ventilated and protected hive of bees, outside of the cluster, at which the dampness arising will be forced outward, and beyond the reach of harm. This degree may be as low as 40°, but it is thought to be nearer 50°, from a table that I have prepared of tests conducted on six hives at once during the first eight days of February. It is believed that at 50° and above, the heat of the cluster, under proper conditions, is ample to force all dampness out of the hive. At this degree of temperature, the chaff above the cluster will always be found dry, except a portion on top, which may often be found quite wet or even moldy. This is to be removed once or twice during the winter and replaced by dry chaff. I also believe that the state of the chaff over the cluster is, at all times, a reliable index of the state of the colony. If, on passing the hand down next to the frames the chaff is found to be sensibly warm, the temperature will range 50° or above, when we may know that all is right.

As the temperature in a hive outside of the cluster recedes towards the freezing point,the hive becomes damp, until moisture accumulates on the outside combs and the hive. From this excessive dampness and a rapid fall of the temperature of the cluster, the bees are forced to exercise their wings and to consume more largely of their stores, to keep within the limits of life. The air of the hive, being both cold and damp, rapidly takes the heat of the cluster, on the well-known principle that any warm-blooded animal more readily parts with its heat in a damp atmosphere, at a given low temperature, than in a dry one at the same temperature. Add, now, to this state of things the great difficulty in the exhalation of vapor from the air tubes, or respiratory apparatus of the bees, which has been so admirably demonstrated by Mr. S. Corneil (see page 728 of the Bee Journal for 1882), and we have the primary causes of dysentery developed in full force. The normal exhalation of a vapor being arrested by a low temperature in a damp atmosphere, we have necessarily an accumulation of liquid in the intestines of the bees, and. being endowed with an instinct not to pass the unnatural excrement in the hive, they become distended often to bursting, and many may be compelled to void within the hive. Soon the entire colony becomes more or less wet, filthy, weak and cold, until all become extinct.

Now, if there is anything else to bee dysentery, it is of secondary origin. Changing states of the honey, as by acetic fermentation, from the development of some one of the many forms of bacteria, might thus act, and unsealed honey, as well as sealed, may absorb dampness until quite liquid, if the hive becomes cold within, and thus add immediately to the difficulty of exhalation.

Last of all, it might be supposed that the consuming of pollen could have something to do with it, but I have been unable to see how it could.

Pollen, being a nitrogenous food, is chiefly of service in the repair of the tissues of the bee, and is little consumed or required by a colony in a state of rest. If, however, a colony, owing to severe and protracted cold, or insufficient protection, or both, is forced to exercise to keep up the temperature, they would probably consume more pollen than at other times. But, even in such case,it would be very difficult to show what relation, if any, it might have to the disorder. It will be safe to remember the pollen theory as one of the curious explanations of the supposed cause of dysentery.

But, with proper ventilation and protection, the secondary causes may be reduced to a minimum, if not entirely overcome. In at least one case of a late swarm, which was fed upon unsealed honey, in partly-filled sections, until there were nine frames nearly full of unsealed honey as late as Nov. 10, the colony has so far wintered in prime order.

The great mistake that has been made in wintering, is in giving *too much* upward ventilation. The practice has been to permit the escape of the heat of the cluster, in the effort to get rid of the dampness, by providing too many or too large openings in the cover. In permitting the loss of heat we have unwittingly failed of our design, since the heat is essential to force out the dampness. In fact, we have got up a condition to bring about the very thing we had sought to get rid of.

Proper ventilation of bees, in chaff hives, may be had as follows: Across the brood frames, place 6 or 7 pieces of wood, ⅜ inch square, and apart about 1 inch. A single thickness of new cotton cloth is laid over them and the frames. The cap, which should contain about 1,000 cubic inches, is then filled with loose chaff (timothy hay chaff preferred), and gently pressed down until 7 inches deep. All holes for ventilation in the cover, which should fit tight as possible to the hive, are to be stopped with pieces of muslin or other cloth. The entrance should be ¾ inch by 8 inches, or an equivalent space. To prevent high winds from driving into the entrance, leave a board, 8 inches wide, up against the front of the hive. In very cold sections of the country, the bees should be crowded upon 5 or 6 combs, by a division-board. Several of my colonies, prepared as above, did not get a flight for nearly three months.

After so long a confinement, I was surprised that some of them did not spot their hives at all, while the others dropped only tiny specks, which were quite unlike the spotting of those colonies having exclusive lower ventilation.

In a letter just at hand, Mr. Doolittle confirms the results of my experiments as follows: "I believe you are quite right regarding lower ventilation, in connection with chaff and a tight cover, for I have some colonies in that condition, and they are the best of any."

A colony of bees, in a chaff hive, on 9 Gallup frames, with strips of wood between each, and all sealed up perfectly tight on top, have wintered in fair condition with an entrance only ½ inch by 2½ inches, but the bees seemed too warm and are flying out, which, if they did much too often, would spot the hive badly. So also, another colony with a larger entrance, 1½ inch by 13 inches. From this it would appear that dampness interferes with exhalation, even in a very warm hive, where the bees are unable to ventilate it. But if a slight amount of air can pass upward, through chaff, the benefits of both upward and lower ventilation can be easily secured.

New Philadelphia, O., March 7, 1883.

For the American Bee Journal.

How to Use Bee Papers.

R. J. KENDALL.

The article by Mr. G. M. Doolittle, entitled: "The use I make of the bee papers," in your issue of Feb. 14, I read with a great deal of interest, as I do all his articles. I set considerable store by his articles, and to index them in a memorandum book which I keep for the purpose of noting these subjects, and to speak of it, is one of the objects of this letter.

The article alluded to, suggested to my mind that I might add a word on this subject, supplementing Mr. Doolittle's remarks. When the Bee Journal comes, I get a blue pencil and sit down to read it, marking it as I go along; sometimes pretty fully, sometimes sparingly. When I have finished reading it, or a few days after, I go over it again, and index, under comprehensive or particular headings, some of the articles and paragraphs in it. I had not hit upon Mr. Doolittle's plan of indexing for times and seasons, but I shall at once take his hint and do so, for I see a valuable advantage in it, and excellent addition to my own plan. Mr. Doolittle's article gave me considerable comfort, too. I seem to forget so much that I do read, when compared with the little I remember. Dr. Johnson once said that "knowledge is of two kinds, the knowledge we have in our heads, and the knowledge we have on our shelves and know where to look for; and of the two kinds, when quantity and quality is considered, I do not know but what the shelf knowledge is the best." I have often thought of the doctor's remark, and, I confess, have tried to utilize it, with advantage, and it was just this that led me to indexing my bee papers. I want an index before the one at the volume's end comes.

I believe much in theory, and Mr. Doolittle's remark that while he had gained considerable knowledge from conventions and visiting other bee masters, yet he obtained more from bee papers, fit me exactly. I can read the Bee Journal for 10 or 15 minutes after my dinner, when I cannot visit an apiary, and can get out of it good matter, if it is there; and this leads me to make this remark, that any man who cannot make his business pay, had better quit the business on his own account and go to work for wages; the odds are against his success. An apiculturist who does not take a bee journal is to me a problem.

There is, however, one more thing I want to say and suggest, and it is this: Why do not local bee men form minor or sub-associations or clubs, never mind how few, and even if the clubs are (like Artemas Ward's regiment, which was all generals) all officers, they may still do themselves, I think, much good. Suppose there are one, two or four only in a district; if these met for a chat and "experience meeting," once in every two weeks, I think it would pay. They could unite on a plan of supplying the local market or shipping to distant markets. These local clubs again could be units of district associations, and altogether a common plan of shipping or marketing honey could be adopted, that would enable them to unite, and, by their unity, work for the common good. They could resolve, for instance, on supplying such and such quantities of comb or extracted honey; they could educate the home market to either.

Suppose, for instance, the local market would take nothing but comb honey, and the bee-keepers in that locality wanted to introduce extracted. They could keep comb entirely out of the market, but supply and talk extracted, till the dealers and their customers, finding they had only Hobson's choice, "that or none," would try the extracted.

I live at Austin, Texas, and if there are any bee-keepers near, who agree with my idea, I shall be glad to hear from them.

Austin, Texas.

* * *

For the American Bee Journal.

Bee Notes from Mississippi.

OSCAR F. BLEDSOE.

We have had an unusually severe winter on bees. Last season my bees gathered pollen in January. This season they have gathered it only at times during February. With Italians, swarming usually commences here during the last week in March. I do not expect any swarms now before the middle of April. I lost a number of nuclei and small colonies from starvation and robbery, owing to want of care, caused by my protracted absence during the fall and winter.

The conclusions I have reached about wintering bees in this latitude, is that with plenty of honey and a well covered hive, even very small nuclei can be wintered safely, out of doors—that the full amount of stores needed must be provided in the fall,—or the robbery of weak colonies will always attend, by any method of feeding in the spring, and that strong colonies, in large hives, winter best, even comparatively.

I have observed, with great satisfaction, that all the colonies in my large hive are in the highest degree of vigor. It has a short Langstroth frame, is 33 inches long, from right to left, containing nearly 4,000 cubic inches in the lower story, with a half story added, 4½ inches high, to contain sections. As a rule, I put on 35 sections at one time, immediately above the brood nest, leaving 4 frames on each side of the sections at the ends of the hive, easily accessible for manipulation at all times. I place the sections across the frames and prevent them from being glued to frames by a tin device of my own invention.

I use wooden separators, purchased in Memphis, being the material cut out of poplar, used for making strawberry boxes. They are much better and cheaper than tin. I chisel small holes in them, so that, with the tin device, there is perfect intercommunication between sections and brood nest, and of the sections with each other. I think it very desirable not to be compelled to use brood frames. On raising the cover I can see what sections are completed, and take such out, one at a time, without disturbing the rest, and put others in their places. I leave the sections on, all winter. If I can make each of my large hives yield an average of 100 pounds of comb honey up to Aug. 1 (a point I am trying to attain), I will consider that I can make bee-culture a profitable branch of agriculture.

Grenada, Miss.

* * *

For the American Bee Journal.

Nebraska State Convention.

The following is a statistical report of bees and honey represented at the Nebraska State Bee-Keepers' Convention, which met at Wahoo, Saunders county, January 11, 1883. As our Association is but in its infancy, we have been unable, as yet, to obtain a complete table of the whole State, but would estimate that there is between 18,000 and 20,000 colonies in the State, this year they produced not less than 50 lbs. of honey per colony.

Apiaries.	No. of Colonies, Fall, 1881.	No. of Colonies, May 15, 1882.	No. of Colonies, Nov. 1, 1882.	Comb Honey, lbs.	Extracted Honey, lbs.	Beeswax, lbs.
1...	..	2	13	85	60	7
2...	10	9	43	845	....	3
3...	10	10	33	1,500	....	..
4...	..	...	7	...	....	..
5...	13	13	21	1,500	....	..
6...	10	22	55	500	2,500	25
7...	12	3	21	300	....	10
8...	42	42	56	2,600	400	5
9...	3	2	6	35	125	3
10...	29	29	60	1,500	1,500	10
11...	20	11	32	1,000	450	20
12...	22	16	61	300	300	15
13...	5	11	62	....	2,200	8
14...	17	12	72	250	300	6
15...	3	3	25	100	....	..
16...	9	7	18	600	....	..
17...	16	12	30	1,200	....	..
18...	68	68	124	3,500	1,500	15
19...	6	6	26	500	500	5
20...	4	4	9	100	200	..
21...	..	2	4	100	....	..
22...	82	48	65	700	1,400	18
23...	1	1	5	30	60	..
24...	7	10	24	1,100	400	..
25...	170	170	320	1,000	5,000	50
Total	559	513	1192	19,195	16,895	200

The next annual meeting will be held on the second Thursday in January, 1884, at which time we expect to obtain a fuller report.

M. L. TRESTER, *Sec*

Lincoln, Neb.

For the American Bee Journal.

The Ventilation of Cellars.

ALLEN PRINGLE.

In a late BEE JOURNAL, Mr. J. B. Mason, of Maine, asks for information on the above subject. He wants a "rousing article on how to ventilate a damp cellar," with "plain, simple instructions how to do it." Now, if my article proves to be a "rousing" one in the sense of arousing people to the imperative necessity of thorough cellar ventilation for the preservation of their own health as well as that of their bees, I will feel repaid for the little precious time spent in writing this.

The amount of sickness, doctors' bills, and even death resulting from the foul air and poisonous gases of cellars without ventilation, would be quite appalling, were it adequately realized. The disease engendering blood-poisoning gases arise into the pantry and kitchen, and spread themselves through the whole house, to be taken into the lungs and blood of the occupants thereof, producing impaired health, sickness, and in many cases death, which, instead of being ascribed to the cause, is usually ascribed to a "Mysterious Providence!" Such, still, is life in this latter half of the nineteenth century. Intelligent people, who are fairly educated, and well posted in the ordinary sense of the word in all that pertains to business, etc., are lamentably ignorant of the very elements of physiology and hygiene. Of the laws and conditions upon which health and physical well-being depend, they know but little. Now, when we consider that such knowledge is really the most important of all knowledge, this is certainly a very bad state of things. And for its existence our educational institutions are primarily to blame. Self-knowledge should stand first on the curriculums of our schools and colleges instead of, as now, last, or not at all. Every parent should be competent to instruct his or her child in the elements of physiology and hygiene—in the laws and conditions governing life and health.

But now, as to the best methods of cellar ventilation. There are various plans, but the very best I have been able to find, and which is at the same time inexpensive and practicable, is as follows: There is, at least, one stove in every house, and sometimes two or three, standing over the cellar. We will begin with the cooking stove, which, in winter, is kept burning most of the time, night and day. Get a tin or zinc pipe, made from previous measurement, to fit, and put it up from the cellar through the house floor, just behind the stove, and close to it, where it will be out of the way. Let this enter the stove-pipe by means of an elbow just above the top surface of the stove. Have a damper placed in this pipe near where it enters the stove-pipe, so that you can turn the draft on or off at pleasure. As to the size of this pipe you can have it made from 3 to 6 inches or more in diameter, according to the size of your stove-pipe. You now have a simple, convenient, and most effective upward ventilator, which is greatly superior to one leading directly outside, for the reason that, in consequence of the draft of the stove, the upward rush of air is greatly increased, and hence a 3-inch ventilator, in such a position, is more effective than one twice as large in the ordinary position. If your cellar is large you can repeat this arrangement in the other stove or stoves standing over the cellar. If you have but one stove standing over your cellar, and are wintering your bees in the cellar, put them directly under the stove where the ventilator will go up from about their centre. If Mr. Mason will adopt this plan of upward cellar ventilation, together with the following method for the ingress of fresh air, I will stake my reputation he will winter his bees successfully in his cellar, even though it have half a dozen springs of water in it. Of course, in cases of wet cellars, the bees must be elevated 2 feet or more from the cellar floor. I have had this arrangement for cellar ventilation in use a dozen years, and am perfectly satisfied of its great superiority over other methods. Although I have an outside bee-house filled in with sawdust, I always, of late years, winter my bees in my cellar, with excellent results. This winter, which has been unusually long and severe, they have now been in winter quarters nearly four months, yet they are still quiet and healthy with the exception of one or two colonies, which were slightly out of order two or three weeks ago. The weather is still, at this writing (March 17), cold and raw, with no prospect of getting bees out to fly for some days yet.

As to under cellar ventilation for the introduction of pure air from without, the subterranean conveyance of the air for some distance to raise its temperature in transit is undoubtedly the best method; but unless this matter has been attended to when the cellar was being built, it is scarcely practicable in most cases. The next best plan then is to introduce the air through a pipe leading from the outside through the cellar door near the bottom, to be also provided with a damper. If there is no door leading from the cellar outside, the pipe may be put through a cellar window; or there may be a little door on hinges put in place of one of the window lights to be opened warm days.

Let every reader of this ventilate his cellar if it is not already done. Let him do it for the sake of his family as well as his bees. At this particular season of the year, cellar air is proverbially impure, and taken into the lungs and blood is disease-producing. We are more careful to guard our bees from disease than ourselves and our families. Let us guard both, but first our families.

I hope that every reader of the Bee Journal, who neglects cellar ventilation, will mark this article and read it again next fall, before he puts his bees in the cellar.

Selby, Ont.

For the American Bee Journal.

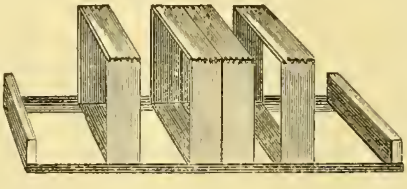
Honey Rack for Sections.

H. LAMPMAN.

I send to the Museum a sample of my improved comb honey rack, complete. It is very simple, easily adjusted, and cheap. One rack holds 8 sections 5x6 x1¾, which are the size I use, and 4 cover a hive. They are put on the hive crosswise. In the spring you can put on one or two tiers of sections or more, as may be desired, by turning the quilt back enough to admit them. In tiering up, one can be set directly on the other, and when they are filled, they are crated for the home market, and are as cheap as anything you can get; and, using them for crates, separators are not needed. When any rack is finished, it can be removed without disturbing the rest. They are made like this: Take 2 pieces of heavy tin, 16 inches long and 1 wide, bend at right angles; cut a ½ inch slot in the end, bend so as to make a square corner; now take a piece of wood ½ inch thick, 3 wide and 5 long, place it in the corners and nail with small nails. Cut a slot in the tin, ½ inch long, 2½ from the end, and a little slanting, so as to run ½ inch below the top of the end piece; now, take a piece of tin ½ inch wide, put it through the slot, clinch and nail to the end piece. This brace is to stay the top so as to key the sections in. Cut two pieces of glass, the same size as the sections, and place one at each end, and key all together. It would be necessary to watch, in case of damp weather. I have shown it to a number of my brother bee-keepers and they all think it a good thing and will use it.

Rockton, Ill.

[The section rack is not a new one. We have had one of them in our Museum ever since 1877, which was made and used by Mr. O. J. Hetherington, of East Saginaw, Mich., for several years before that. They were mentioned in the Bee Journal at that time, and the engraving used in this article was the same one then made to describe them, the only difference being the four stays across the corners to strengthen them.—Ed.]



For the American Bee Journal.

Bees in Florida vs. Iowa.

O. O. POPPLETON.

I see, by late numbers of the Journal, that our homes in the Northwest are actually surrounded by cold weather, snow, ice, blizzards and dead bees, but it is hard for us, who happen to be stopping in this far-away corner of the world, to realize that such things can be. Here it is considered extremely cold when the thermometer marks the freezing point; it ranging at present from about 55° in the morning to 80° in the afternoon. Bees are booming; one of my colonies cast a natural swarm Feb. 25, and a second swarm ten days later, filling up their hives with honey and brood, in fact, are in the same condition now that I hope my bees in Iowa will be by the middle of next June.

I am heartily in favor of organizing an Iowa State Bee-Keepers' Association, and should have done what little I could toward that object had I not been so far absent from the State, both last winter and this. The plan of holding the first convention during our next State Fair at Des Moines, seems the most feasible, and I hope some bee-keeper, living in or near that place, will take the responsibility of calling a convention and making the necessary local arrangements.

On page 104, Mr. Demaree says that his bees "rarely ever supersede their queens during the early and late honey harvests." The exact reverse of this has been true in my apiary, nearly all the superseding being done during the late harvest, usually during the month of August. Difference of localities is, of course, the cause of our different experiences.

He says further, on same page, "that he does not remember of ever having had a queen to survive two whole seasons whose wings had been cropped in the usual way." This is also directly contrary to my experience, as I have had scores of them retained through their second and third seasons, and some through their fourth. I do not believe that clipping a queen's wings has a particle to do with their being superseded, or with causing natural swarming.

I have practiced clipping queens' wings for several years past, and have not been able to see a particle of harm result from the practice, but do know that it has been quite a help. I hardly think that mere theoretical reasons will induce me to change my light Italian bees for hybrids, or discontinue clipping queens' wings so long as, by their aid, I can keep my average production of honey away up among the best.

I used to catch queens while clipping their wings, between thumb and forefinger, but have lately used a pair of jeweler's tweezers for that purpose. I think all who give the tweezers a trial will continue their use.

Tampa, Fla., March 12, 1883.

Emerson Binders—made especially for the Bee Journal, are lettered in gold on the back, and make a very convenient way of preserving the Bee Journal as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Transferring Bees.

1. In your new method of transferring, how do you unite the second forced swarm with the first one, without danger of their fighting? 2. Will not a good portion of the second driven swarm return to the old gum and be lost? 3. Will not a considerable lot of black or impure drones be let loose from the old gum by the time the second drive is made?

Myersville, Md. W. R. YOUNG.

1. I never knew any fighting to take place, because the bees are all of one queen and the second queen is only just out.

2. The "old gum" is split up for kindling, and they, therefore, will hardly find it to return to. The new hive, whether increase is made or not, is practically in the place of the "old gum."

3. Supposing that the old colony is not of the blood you wish, you will have to put up with them, or guage them out, and kill them as fast as they hatch.

Questions.

1. Will it do to arrange supers with sections at right angles with the brood frames, or ought they to run parallel? 2. What space ought to intervene between brood frames and the sections? 3. What point must the temperature reach to make it safe to lift brood frames and examine them? 4. I find by measuring, that sections purporting to be 2 inches wide are only 1⅞ wide. Is this the rule, or are they *meant* to be 2 inches? 5. My brood frames are made of plain, flat pieces, without rib or wire on top bar, 10x11½ inside measure. How shall I fasten foundation in them? 6. Is it proper to put full sheets of foundation in frames, of the above size and shape? 7. What foundation do you prefer?

Northboro, Iowa. O. E. MOORE.

1. For convenience in handling, and the position of hives, and getting straight combs, I much prefer to have all combs run parallel.

2. 5-16ths where there is no honey board between them. Where there is, the same between the board and each.

3. That depends entirely on how long you keep them out. I handle them any time when the bees can fly, and often, quickly, when they cannot.

4. They are usually *scant* 2 inches. Thinner combs are best to produce.

5. I should wire them with No. 30 tinned wire. If I only wished to put on foundation guides 1 or 2 inches wide, I would see that the under side of the top bar was dressed smooth, and "mash" on with putty knife, or Parker foundation fastener.

6. Most assuredly; and I should be sure to do it, but not without the use of wires.

7. Given, Vandervort, Dunham and Root, and, in fact, *all* kinds are worth more than $1 per lb. to any one who will use them properly. I have had the best success with the Given, both for brood and surplus departments.

SELECTIONS FROM OUR LETTER BOX

Making Comb Foundation.

I packed 6 colonies of bees with chaff and straw, in clamps, and they did not have a cleansing flight from the last of November until the middle of February, but they have come through, so far, all right; less than two teacupfuls of bees have died, in all of them. Please describe the utensils necessary to make foundation with a roller mill. T. J. PIGG.

Riverside, Iowa.

[The necessary utensils for making comb foundation, and their use, (with other useful hints), are thus described by a manufacturer:

Make the dipping tank 4x12 in., and 2 feet deep; set it in a larger one, with water between, to regulate the temperature. Melt your wax in another boiler (a common wash boiler will do), have water in, to prevent burning the wax; dip into the deep tank as fast as the wax is melted.

Make 4 or 5 thin boards of seasoned basswood, the exact width, when dry, that you want you sheets. Nail cleats on top, to prevent warping, and make a handle. Have them thoroughly water-soaked before using; the boards will swell as much as the sheets will shrink. Wet the boards before dipping, but shake off all the water you can. Put the board in the wax as deep as the length you want your sheet, repeat as soon as the wax stops dropping, dip 3 times for brood foundation and once for boxes; hold the board *perfectly plumb* while cooling; as soon as the wax stops dropping after the last dip, set it to one side and take another board. By the time you have dipped four, the first will be ready to peel off. If the boards are smooth and edges perfectly square, your sheets will need no trimming. When the wax begins to scum around the edges of the tank, the temperature is right. If sheets crack in cooling, your wax is *too hot*. By the above plan the sheets will be tapering. *If started with the thin end of the sheet* in the mill, you will never have no trouble, and the sheet will be long enough to cut off the thin end.

Thin paste made of cheap starch makes the best lubricator for the rolls.

Dipping plates, as described above, made from clear straight-grained basswood, for any width, costs about 3 cents per inch in width. If your tank is wide enough to take a 12-inch dipping-board, you can dip narrow strips for starters, 6 at a time, by having a similar board divided into 3 parts, by broad saw-cuts. Each board will then be about 3¾ inches, and every dipping makes 6 narrow sheets.

The manufacturers furnish directions for using when you buy a machine, mill or press.—ED.]

A Section too Small.

MR. EDITOR:—You will remember, when we were at Toledo, at the Tri-State Fair, among a crowd of bee-keepers, I stated that "the one-pound section was a curse to the producer, a curse to the retailer, and a curse to the consumer," and gave my reasons. The sneering, silent laugh pronounced me the fool of the crowd. At the Michigan convention, I stated the same thing, with the same decision. Now, comes Mr. F. I. Sage, of Wethersfield, Conn. (who handles over 50 tons of honey a year), with an article verifying my statement fully, and Mr. Wright, of Knowersville, N. Y., too, must be reckoned with us. I write this to remind the readers of the BEE JOURNAL that I am not the only foolish one left.

E. B. SOUTHWICK.

Mendon, Mich., March 16, 1883.

Large Yields of Honey and Increase.

When I see reports of large yields of honey and great increase of bees, I always know what I think of it. I think, or rather know the party making said report, has had a good, long, regular flow of honey. In his book —"The Hive and Honey Bee,"—Rev. L. L. Langstroth says that a large increase of bees and a large yield of honey cannot be had at the same time, and I am satisfied if the dear old man is spared to revise that classic bee book, you will find this statement corrected, for he has too much faith in his fellow bee-keepers to think they would intentionally tell a bee yarn about it. If the good old man could be in my bee-yard, this beautiful Sabbath morning, he would exclaim, no wonder Texas rolls up such big reports! My bees are fairly crazy over the cottonwood, Judas tree, wild plum, fruit trees, and a host of other blooms. One continual bloom from now until July, if we can only have a good shower of rain every 15 days.

B. F. CARROLL.

Dresden, Texas, March 20, 1883.

Feeding Flour in Spring.

1. What is best for early feeding in the spring? 2. How should it be given? P. REARDON.

Jamestown, Colo.

[You will find an excellent article on this subject in this number of the BEE JOURNAL.—ED.]

Failures Through Mismanagement.

It is stated here by a man who professes a practical experience, that bees cannot do well here, because the pasturage is grazed too close. My experience is exceedingly limited, but in no book or bee paper have I ever seen such a statement. There is an abundance of poplar, ash, locust, and other bee trees here, plenty of white clover, fruit trees and fall plants, and in a radius of 5 miles there are not 100 colonies of bees. I think that a failure is owing to mismanagement. It is true that the meadows here are closely grazed. Can that be the reason that the old-fashioned bee men have so little honey?

E. H. Gaither.
Harrodsburg, Ky., March 17, 1883.

[Ordinary grazing helps some bee pasturage. Probably mismanagement has as much to do with the lack of honey as anything.—Ed.]

Half-Pound Sections Not Wanted.

This is a cold winter. My bees are packed in sawdust, on the summer stands; they are now in good condition. I lost one colony by dysentery; the rest all clean and bright. Much has been said and written about introducing the consumption of honey in place of syrups, and now some turn around and work on the contrary to make honey a luxury, which it surely is when half-pound sections are adopted. It is not the consumers that demand small sections, but some bee-keepers that do it. George Castello.

Saginaw, Mich., March 17, 1883.

Large Increase and Honey Crop.

I am satisfied that if I had read Mr. Heddon's article on "How to prevent after swarms," in time for last season's work, it would have been worth a year's subscription of the Bee Journal to me. Mr. Roberts says on page 137, that he does not believe in large yields of honey and bees in the same season. I have sold 3,600 lbs. of last season's crop, "all the same," and I have 65 colonies alive at present (6 dead), besides what honey a family of ten could use, and there are full 30 lbs. to the colony, at this date, in the hives, besides the 100 extra combs of honey that are reserved for use, if needed, which I doubt. If Mr. Roberts will visit me, this spring, I think I can convince him that "these are facts." All of the honey and increase was produced by 19 colonies, that did not have one pound of sweets in any of them on June 4, 1882, and 3 of them were four-frame nuclei, shipped to me May 1, and transferred May 4. Bees are in fair condition, and healthy at present. S. H. Moss.

Colchester, Ill., March 16, 1883.

Bees in Good Condition.

After almost 4 months confinement I took 15 colonies out of my cellar on the 13th; all in nice, clean condition, and having plenty of honey and brood. On the day following I took the rest out of the cave; 130 in all, and one dead; the rest were heavy and had plenty of bees. So, out of 145, 141 came through in as healthy condition as I ever saw them in the spring. I had 16 on the summer stands, with no protection, and lost 4. We have had a pretty severe winter, and a good many bees are lost, where no protection was given them; while others, that were packed in chaff, or put in cellars, came out without much loss, as a rule. J. E. Hastings.

Carlisle, Iowa, March 16, 1883.

Bees Strong and Healthy.

My bees, to all appearances, have wintered splendidly; I put 100 colonies in bee-house, and took out 101 hives, with bees in them. I had a hive of nearly empty comb in the house, and the bees got so hot, the day before I took them out, and crawled around and got into this hive, enough to make a swarm, but, as I had no queen, I had to put the bees in other hives again. I fear the effects of the sudden change on the 18th; the bees were flying out pretty freely, when a gale struck us from the northeast and it began to freeze; the bees were scattered, and I fear there is a large loss to each hive by their getting chilled. I never had my bees come through as strong and healthy, when taken out, as they were this spring; but I expect to lose some that I will have to break up, by loss of queens, as I did not get all my old queens changed last fall.

R. R. Murphy.
Garden Plain, Ill., March 21, 1883.

Shipping Crates for Honey.

What size of shipping crates is the most popular in the great honey markets of the United States?

M. Blanchard.
Sherwood, Wis.

[Those holding one dozen two-pound sections or two dozen one-pound sections of honey.—Ed.]

Gathering Pollen and Honey.

Bees came through the winter finely; have plenty of honey yet; are breeding up rapidly, gathering pollen and honey from peach and plum blooms. We have splendid weather, and all early vegetables are up and growing finely. I have 40 colonies to start with. E. P. Massey.

Waco, Texas, March 14, 1883.

Looking for a Good Honey Harvest.

It has been a very poor winter for bees here, they have had no flight since Nov. 11, worth mentioning. Dysentery is prevailing here, which seems to be caused by bad honey gathered last fall; some that were fed with sugar are not affected. I have 8 colonies in chaff hives, and packed 63 in a chaff bin; those in the bin had the dysentery, and some, I fear, are passed their troubles. The loss around here will be very heavy, this spring. We are looking for a good honey harvest, as we always have a good one after a hard winter and lots of snow. My bees are all Italians and Syrians. I use the Gallup frame, but have two in the Quinby frame, which is far stronger than the rest, and always winter and come through stronger than the rest. Honey sold readily at 15c. per lb. for extracted and 25c. per lb. for comb. I believe dampness is worse on bees than cold. I could not get along without the Bee Journal.

Arthur Russell.
Millbrook, Ont., March 14, 1883.

Corrections.

I find some blunders in my article on the standard Langstroth hive, on page 116 of the Journal, which I desire to correct, to wit: The figures $18\frac{3}{8}$ and $18\frac{5}{8}$, given in 3d and 4th lines, should be $17\frac{3}{8}$ and $17\frac{5}{8}$—one inch out of the way, in that place, might make lots of trouble. In line 35, next column, drop first comma and "hives," and insert *mills* instead. The word "former" in 36th line should be *farmer*. M. M. Baldridge.

St. Charles, Ill.

[The "blunders" in the *figures* were in Mr. B.'s copy; the *words* were not very plainly written and were an oversight of the printer, who also omitted a figure "4," in Mr. B.'s article on page 102, in the second line after the last engraving. It should read: "the 4 recesses or passage ways."—Ed.]

Bees in Georgia.

Bees that have been properly cared for have, thus far, wintered well in Cherokee, Ga. The honey flow was light, in this section, during the latter part of last summer; hence, many late colonies, that were not fed, died of starvation. Bees are invariably wintered upon their summer stands, in the Southern States, and if kept dry, with plenty of good, available food, are never seriously affected by cold. It would seem that the above conditions are all that need be observed in any honey-producing country, since to suppose that bees freeze and die under such circumstances, is to suppose a physical inconsistency contrary to the laws of nature. Our bees have been gathering pollen for the past three weeks.

Wm. Farell.
Rome, Ga., March 9, 1883.

Out of the Woods Again.

The middle of March has come, and my bees are all alive but two nuclei, which died of starvation. My bees have been bringing in pollen for a month from the elm, and have from 1 to 3 frames of brood in each hive. I consider that good for the middle of March. In answer to the question asked by Mr. C. W. McKown in the Bee Journal for March 7, I would say I have a few chaff hives, but my bees are in no better condition in those than in my single-walled hives. I do not want any more chaff hives in my yard; they are too unhandy for transportation and are more expensive than single hives. I place my hives in a row and pack sawdust all around them, except the front, and cover them well. My thermometer reached zero only twice last winter, and I do not want any better hive than the single-walled Langstroth hive for this part of the country. J. F. KIGHT.

Poseyville, Ind., March 15, 1883.

Bees Carrying in Flour Lively.

Our bees are booming. We have 88 colonies. They are rearing young bees very fast. They have carried in nearly 200 lbs of flour. C. J. LOHMANN.

Cameron, Mo., March 19, 1883.

Substitute for Pollen.

Corn meal is the best I have tried yet. If you want to see bees circling, just take 3 or 4 cotton grain sacks, spread them on some boards, and lay bricks on the corners, to keep the wind from blowing them off; now spread the meal on them. Just try it. Bees are working on soft maples, to-day. My 30 colonies wintered all right, and all have hatching brood.

J. S. HOFFMAN.

Madisonville, O., March 19, 1883.

Bees packed in sawdust wintered well.

I packed 40 colonies, on the summer stands, in sawdust; they appear to be in good condition, so far. I have 16 colonies in a summer and winter house. Those on the north side show signs of dysentery; those on the south side seem to be in good condition. The weather has been very cold this winter, and now it is 5° above zero; on the 20th it was down to 5° below.

J. N. BECKER.

Oakfield Centre, Mich., Mar. 22, 1883.

Blasted Hopes.

140 days, and not a day in which I could set a colony out. I had 44 in fine condition, on Nov. 5, 1882, and to-day I have only 12 left; there is from 2 to 4 feet of snow all over my yard, and the mercury was down to 11° below zero last night, and is 10° below to-night. "Blasted Hopes," sure enough, for 44 colonies of as handsome bees as ever flew. Discouraged, is no name for it; but as Adam Grimm said, "If I do lose all, I will show you how soon I can fill those hives up again, with so many good combs as I have." Nearly all the bees around here are dead.

C. F. GREENING.

Grand Meadow, Minn., Mar. 20, 1883.

Convention Notices.

☞ The semi-annual meeting of the Western Bee-Keepers' Association will be held at Independence, Jackson County, Mo., on Saturday, April 28, 1883, at 10 a. m. Papers prepared for the occasion by the president, secretary and others will be read, and matters of general interest to bee-keepers discussed. A general attendance of persons interested in bee-culture is requested. The present membership of this Association control 2,000 colonies of bees.

S. W. SALISBURY, *Sec.*
Kansas City, Mo.
J. A. NELSON, *Pres.* Wyandotte, Kas.

☞ The spring meeting of the Western Michigan Bee-Keepers' Association will be held at Supervisor's Hall, Grand Rapids, April 26, at 10 a. m.

F. S. COVEY, *Sec.*
Coopersville, Mich.

☞ The Texas State Bee-Keepers' Association will hold its Fifth Annual Convention at McKinney, Collin Co., on Tuesday and Wednesday, April 17th and 18th, 1883; at the residence of Hon. W. H. Andrews.

WM. R. HOWARD, *Sec.*
Kingston, Texas.

☞ The next meeting of the Haldimand, Ont., Bee-Keepers' Association will be held at Nelle's Corners on Saturday, March 31, 1883, at 11 a. m.

H. CAMPBELL.

☞ The Union Bee-Keepers' Association will meet in Grange Hall, Eminence, Ky., on Thursday, April 26, 1883. All bee-keepers, and the public generally, are invited to be present.

G. W. DEMAREE, *Sec.*
Christiansburg, Ky.

☞ The regular meeting of the Farmers' and Gardeners' Club, will be held April 2, at A. Z. Madison's office, Fredonia, N. Y. Question: "Bees, Fish and Poultry." Mr. U. E. Dodge will open the discussion with a lecture on "Bees and Bee-Culture," giving practical manipulations of the hive, showing the various improved implements, devices and terms used in bee-culture, illustrating the lecture with a colony of bees. Bee-keepers are especially invited to spend the afternoon at Sunshine Apiary, where Mr. Dodge will try and entertain them. Mr. Dodge is a thoroughly practical apiarist, and this will be a rare treat for bee-keepers in Western New York. Means will be taken to form a Bee-Keepers' Association for this part of the State.

A, Z MADISON, *Sec.*
U. E. DODGE, *Pres.*

☞ The Eastern Michigan Bee-Keepers' Society, will hold its annual meeting in Detroit, April 3, in Abstract Hall, commencing at 10 a. m. The following subjects will be brought up for discussion: What is the best means of extending the honey market? At what price can honey, either comb or extracted, be afforded? Is there danger of over-production? Has glucose affected your market, and if so, how? What is the best test for glucose? In judging queens, what points are to be considered, and what is the order of their importance? Foul brood, and its prevention and cure. An interesting meeting is expected.

A. B. WEED, *Sec.*
75 Bagg St., Detroit, Mich.

☞ The spring meeting of the Cortland Union Bee-Keepers' Association will be held in Cortland, N. Y., on Tuesday, May 8, 1883.

M. C. BEAN, *Sec.*

☞ The Central Michigan Bee-Keepers' Association holds its spring convention at Lansing, in the State Capitol building, on Tuesday, April 17, 1883, 9 a. m. Programme: President's address; Essays: Prof. A. J. Cook, on Wintering Bees; S. C. Perry, on Chaff Hives; C. Case, on Comb Honey; O. S. Smith, on the Best Bee; A. D. Benham, on Extracted Honey; Mr. Harper, on Queen-Rearing; Mr. Waldo, on Best Method of Wintering Out of Doors, in Single-Walled Hives; E. N. Wood, on Sections; and E. Greenaway, on Comb Foundation. All bee-keepers are invited to attend or send essays, papers, implements or anything of interest to the fraternity A full attendance is requested.

E. N. WOOD, *Sec*
North Lansing, Mich.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., March 26, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The nominal price of extracted is 7c. for dark and 9c. for light—here. The supply is abundant and sales are slow.

BEESWAX—None in the market.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—There is no excitement in the honey market, but sales are fair to our regular trade. Offerings are plentiful of extracted and comb honey. Extracted brings 7@9c. on arrival. The sales of comb honey are very slow, although there is a large supply of first-class quality on the market. It brings 12@18c. on arrival.

BEESWAX—Comes in slowly and brings 20@30c. per lb., according to quality. CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The past month has not reduced the stock of comb or extracted honey, the receipts having been larger than the amounts taken for consumption. Prices are weak and irregular, ranging from 16c. to 18c. for white comb in the smaller frames; dark, very little selling, offered at 12½c. to 14c. Extracted, 8c. to 10c., according to color.

BEESWAX—None in the market.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—Quotations for choice are merely nominal, as there are none of that quality offering. Common qualities are in light supply and still lighter demand.

White comb, 14@17c.; dark to good, 11@13c.; extracted, choice to extra white, 8½@9½c.; dark and candied, 5@7½c.

BEESWAX—We quote 30@33c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Very quiet; dull. Comb at 14@16.—some inferior sold at 10c.; strained at 6½@7c., extracted at 7½@8½c., lots in small packages more.

BEESWAX—Scarce and wanted at 33@34c.

W. T. ANDERSON & CO., 117 N. Main Street.

CLEVELAND.

HONEY—Is a little lower, and at the lower price it has moved off a little better of late. 1-lb. sections of best white sold at 18½@19c.; second grades, 1-lb., 17c.; 2-lb. sections a little slow at 17@18c. Extracted very dull at 9@11c.

BEESWAX—None in market.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—Our supply is gone; we have none to quote.

CROCKER & BLAKE, 57 Chatham Street.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the Bee Journal.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1 year, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with $6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For four subscribers, with $8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with $10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly Bee Journal for one year.

To get any of the above premiums for the Monthly Bee Journal send double the number of subscribers, and the same amount of money.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

☞ And still, we are obliged to say that the books on Queen-Rearing, by Henry Alley, have not been received. As soon as they do, the orders we have on hand will be filled. In order to appease those who are impatient, we may say that Mr. Alley has written us that the book will make 25 or 30 more pages than he anticipated; and adds: "We had no idea that there would be so many pages. I think all will be well pleased with the extra amount, and feel compensated for long and patient waiting." It is all right, except announcing it "ready for delivery" a month before it *is actually printed and bound*. As this is Mr. Alley's first experience in publishing, we shall have to overlook it on the ground of inexperience. Old publishers know better.

☞ The stylographic pen is one of the necessaries of our modern civilization. If Hood's song had been "Dip, dip, dip," instead of "Stitch, stitch, stitch," it would have lost its text at the hands of Mr. Livermore, who has given his age this perfection of pen, penholder, and case, and ink, all in one, handsome, and always at hand and ready for use. The inventor has put some new improvements into it, and now what remains but for every scribe and letter writer to find it on his desk. Ink, filler and cleaner, all go with it. And, to crown all, the price has been reduced to $2. Send that amount to the sole agent, Mr. Louis E. Dunlap, 290 Washington St., Boston, Mass., and the return mail will bring you this most perfect pen.—*Contributor, Boston, Mass.*

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......$1 00
" 100 colonies (220 pages)...... 1 50
" 200 colonies (420 pages)...... 2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

☞ Postage stamps, of one, two or three cent denomination, accepted for fractional parts of a dollar; but money is preferred.

WOOD SEPARATORS!

PRICE LIST of the Besse Wood Separators: For the wide Langstroth frame, per 100, 50c.; per 1000, $4.00. They are of basswood, size 17½x3½x1-16. Any size to order. Send 3 cent stamp for sample.

12A3t **DR. H. BESSE,** Delaware, Ohio.

BEE KEEPERS' SUPPLIES! Simplicity and Chaff Hives, Queens, etc. Send for Circular. Address,
HOWARD NICHOLAS,
12A4t 4B1t **Etters, York Co., Pa.**

FARMS Wanted for Eastern buyers. Stamp for information. S. P. BROCKWAY, Times Building, Chicago, Ill. 12A4t

100 COLONIES ITALIAN BEES,
FOR SALE,
also, queens and nuclei. Will exchange for Jersey heifer, pair Poland China pigs, or Plymouth Rock fowls. Write for prices.
C. WEEKS,
11A4t Clifton, Wayne Co., Tenn.

FOR SALE, Colonies and Nuclei of ITALIAN BEES, QUEENS, Extractors, Bee Books, and Supplies. Address, OTTO KLEINOW, opposite Fort Wayne, DETROIT, Mich. 11AB3t

Vandervort Comb Fdn. Mills,
Send for Samples & Reduced Price-List.
10AtfB1 **J. VANDERVORT, Lacyville, Pa.**

60 Colonies of Bees for Sale.
I have 60 colonies of bees in improved double portico Langstroth hives for sale.
13A1t **C. H. DIBBERN,** Milan, Ill.

SENT FREE!
Our descriptive catalogue and price list of bee hives, full colonies, Italian bees, Italian queens, honey extractors, smokers, hive openers, bee veils, etc., to any address, upon application. Address
F. A. SNELL,
13A1t4B3t Milledgeville, Carroll co., Ill.

SEND POSTAL for my 20 page price list of Italian, Cyprian and Holy Land bees, queens, nuclei and apiarian supplies.
H. H. BROWN,
13D3t Light Street, Col Co., Pa.

COMB FOUNDATION.
Owing to the scarcity of beeswax, the prices of comb foundation will hereafter be as follows:

	Dunham.	Thin.	Extra Thin.
10 lbs. or less.	55c.	65c.	72c.
25 " " ..	54	64	71
50 " " ..	53	63	70
100 " " ..	52	62	69

ALFRED H. NEWMAN.
923 W. Madison St., Chicago, Ill.

JUST OUT!
New circular and price of Bees and Queens. Also, STENCILS for bee-keepers' use.
JOS. M. BROOKS,
4B6t Columbus, Ind.

CUT THIS OUT And Return to us with TEN Cents, and you'll receive by mail, a Golden Box of Goods, that will bring you in more money in One Month than anything else in America. Absolute Certainty. M. Young, 173 Greenwich St., New York.

OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

VOL. XIX. CHICAGO, ILL., APRIL 4, 1883. No. 14.

OLDEST BEE PAPER IN AMERICA THE AMERICAN BEE JOURNAL ESTABLISHED IN 1861

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

The Eyes of a Bee.

A correspondent, who had read our brief reply to Mr. C Theilmann on this subject, sends the following request:

MR. EDITOR:—Please describe more fully, in detail, the simple and compound eyes of the bee. It is a subject of interest to us, who do not understand all about bee optics. Tell us what simple and compound eyes are, in the BEE JOURNAL. J. W. B.
Suwanee, Ga., March 10, 1883.

We cannot do better than to quote, from Prof. Cook's "Manual of the Apiary," the following, on this very interesting subject:

"The eyes are of two kinds, the compound, which are always present in mature insects, and the ocelli or simple eyes, which may or may not be present. When present there are usually three, which, if we join by lines, we will describe a triangle, in the vertices of whose angles are the ocelli. Rarely there are but two ocelli, and very rarely but one.

"The simple eyes (*F F F*) are circular, and possess a cornea, lens and retina, which receives the nerve of sight.

"From the experiments of Reaumur and Swammerdam, which consisted in covering the eyes with varnish, they concluded that vision with these simple eyes is very indistinct, though by them the insect can distinguish light. Some have thought that these simple eyes were for vision at slight distances. Larvæ, like spiders and myriapods, have only simple eyes.

"The compound eyes are simply a cluster of simple eyes, are situated one on either side of the head, and vary much in form and size. Between or below these are inserted the antennæ. Sometimes these last are inserted in a notch of the eyes, and in a few cases actually divide each eye into two eyes.

"The eyes may meet above as in drones (Fig. 1), most two-wing flies and dragon-flies, or they may be considerably separated, as in the worker-bees (Fig. 2). The separate facets or simple eyes, of each compound eye, are hexagonal, or six-sided, and in the microscope look not unlike a section of honey-comb. The number of these is prodigious—Leeuwenhoek actually counted 12,000 in the eye of a dragon-fly—while some butterflies have over 17,000. The compound eyes are motionless, but from their size and subspherical shape, they give quite a range of vision. It is not likely that they are capable of adjustment to accord with different distances, and it has been supposed, from the direct darting flight of bees to their hives, and the awkward work they make in finding a hive when moved only for a short distance, that there eyes are best suited to long vision.

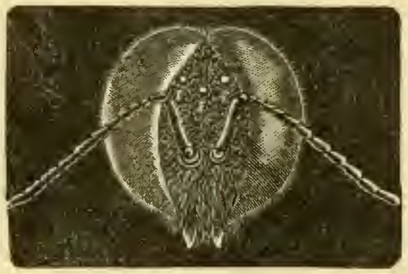


Fig. 1—Head of Drone, magnified.

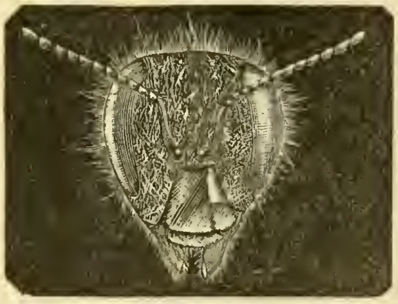


Fig. 2.—Head of Worker Bee, magnified.

"Sir John Lubbock has proved, by some interesting experiments with strips of colored paper, that bees can distinguish colors. Honey was placed on a blue strip, beside several others of various colors. In the absence of the bees he changed the position of this strip, and upon their return the bees went to the blue strip rather than to the old position. Our practical apiarists have long been aware of this fact, and have conformed their practice to the knowledge, in giving a variety of colors to their hives. Apiarists have frequently noted that bees have a rare faculty of marking positions, but, for slight distances, their sense of color will correct mistakes which would occur if position alone was guide."

Our correspondent should get a copy of the Manual. Its perusal will repay him a hundredfold its cost, as well as be a ready book of reference on every subject connected with bees.

Clubbing with Cook's Manual.—A subscriber, who has already paid $2.00 for the Weekly BEE JOURNAL for 1883, wants to know if we will send a copy of Cook's Manual or Bee-Keepers' Guide, in cloth, if he sends us 75 cents more. Certainly, we will; the only requirement being that the full price for the JOURNAL, either weekly or Monthly, has already been *paid to us*, and no other premium has already been sent. All such may send us 75 cents in postage stamps and get the Manual, bound in cloth, by next mail.

The Manual, bound in paper covers, will be sent for 50 cents, extra to the price of subscription. This offer will be good only until the seventh edition, printed last year (1882), is exhausted, and no more will be printed in paper covers. This offer will, therefore, only last for a very short time, and those who wish to avail themselves of it, should order *at once*.

☞ Some persons, having sent us a club of subscribers through a club-agency, have written us to send the premium for getting up the club. To do this would be *doubling* our premium. The club agency gets their commission, and then we can send no premium. Please remember, to be entitled to the premiums we offer, the full amount of the subscriptions must be sent direct to this office.

CORRESPONDENCE

For the American Bee Journal.

Reply to J. W. Merrifield.

G. M. DOOLITTLE.

On page 100, present volume of the BEE JOURNAL, J. W. Merrifield asks why the plan of giving each colony a laying queen immediately after swarming, had not proven a success with me. That is right. If you do not understand anything, ask questions, and I will explain, if I know how; if I do not, I will frankly say so.

For years, we have been told that no colony should go without a laying queen a single day, if it were possible to give them one, and plans of introducing queens, which required that the hive should be queenless a few days previous, have been severely criticised. We have also been told, for years, that the bee-keeper who wished to secure the best results from his bees, should have a laying queen ready to give each old colony as soon as they swarmed, as the time lost to them, by rearing a queen, was equivalent to a swarm of bees. Being eager to know, for myself, all the plans which would give the best results, I have experimented largely, and the truth of the statement that the time lost to the bees by rearing a queen in natural swarming, was equivalent to a swarm of bees, is the first reason it has not proven a success. If it were bees I was after, the case would be different. With me, white clover yields enough honey to keep the bees breeding nicely, and prepares them so that they mainly swarm from June 20 to July 1. Our honey harvest is from basswood, which blooms from July 10 to 16. Now, all who are familiar with natural swarming, know that the bees are comparatively few in numbers in spring, and increase by the rapidly increasing brood produced by the queen, which, in due time, hatch into bees, until a swarm is the result.

By giving a laying queen to a colony immediately after it has cast a swarm, we bring about the same result (swarming) as before, for we place the bees in the same condition. The only difference is, that having plenty of brood, they build up quicker, and are prepared to swarm in a shorter time. As this second swarming, brought about by giving the laying queen, comes right in our basswood honey harvest, it cuts off the surplus honey, for it is well known that bees, having the swarming fever, do little or no work in the section boxes, and if allowed to swarm, the object we have sought after (section honey) is beyond our reach.

Having given the result of my experience on this point, let us look at how the same colony would work, had we not given the bees a laying queen. Eight days after the swarm has issued, the first young queen will have emerged from her cell, as a rule, when the apiarist should remove all the other queen-cells from the hive, so that second swarming is entirely prevented. In ten days more our young queen is ready to lay, which is about the time the basswood begins to yield honey largely. During this period, between the time the swarm issued and the young queen commences to lay, the bees not having any brood to nurse for the last half of the time, consume but little honey; hence, as fast as the young bees emerge from the cells, they are filled with honey; for bees, not having a laying queen, seldom build comb in the sections. Thus, when the young queen is ready to lay, she finds every available cell stored with well-ripened honey. At this point, the instinct of the bees teach them that they must have brood or they will soon cease to exist as a colony, and a general rush is made for the sections, the honey from below is carried above, so as to give the queen room, and, in a week, we have, as a result, the sections nearly filled with honey. I have often had such colonies fill and complete 30 two-pound sections in from 8 to 12 days, while those to which I had given the laying queen immediately after swarming, did little but swarm during the same time.

Bear in mind we are talking about producing comb honey, not extracted. Different locations may give different results, still I think that nearly all sections give a large flow of honey at a certain period during the season, rather than a steady, continuous honey harvest the whole season. To such sections these remarks are especially applicable.

My second reason is, that after basswood we have a honey dearth, hence, the bees from the introduced queen are of no value, but, on the contrary, become consumers. On an average, it takes 21 days from the time the egg is laid, to the perfect bee ready to emerge from the cell. Then, if the colony is in a normal condition, this bee does not commence labor in the field till 16 days old; hence, the eggs for the honey-gathering bees must be deposited in the cell 37 days before the honey harvest ends, or else they are of no value as honey-producers. As the basswood is all gone before the eggs of the introduced queen become honey-producing bees, and as the larger part of them die of old age before buckwheat and fall flowers yield honey, it will be seen that a great gain is made by letting each old colony, having cast a swarm, rear their own queen, for, thereby, we save the expensive feeding of the larvæ, which are to become expensive consumers of the honey of the hive. Also, the chances are, that when the colony rears its own queen, they will be stocked with younger bees for wintering in November, than where a queen was introduced immediately after swarming.

The one point worth knowing above all others in bee-keeping, is a thorough knowledge of the location we are in, as to its honey resource, and then getting the largest amount of bees possible at that or those times to gather the honey, having just as few at all other times as is consistent with the accomplishing of this object. A prominent apiarist advised, a few years ago, using artificial heat to get our bees strong so that they would swarm in April, while others, like L. C. Root, was advising keeping them in the cellar till pollen was plenty, to prevent early and useless brood-rearing. The advice of the first would be to bee-keepers the same as my sending four men and teams 12 miles to the railroad for a car load of lumber when I did not know it was there for certain. They went and came back, but no lumber. The part which particularly had a bearing on me was, I had to pay them the same as if they had found the lumber and brought it back. Just so with getting bees out of season. We have to pay the same price for them that we would to get them, so that each one became a producer instead of a consumer.

If all who read this article will study their location, and then rear their bees in reference to that location, I think they will find their bees will do as well as their more successful neighbors.

Borodino, N. Y.

For the American Bee Journal.

Wintering, Ventilation, Etc.

DR. I. P. WILSON.

DEAR EDITOR:—After spending an hour very pleasantly in reading the JOURNAL, I desire to say that the extracts you have published from Mr. Baldridge's letters are quite sufficient to convince any candid mind that *right* is not on his side. Yes, your readers, "certainly," will approve of the controversy being terminated right here. The columns of the JOURNAL are too valuable to be occupied with such wrangling.

My bees have wintered tolerably well. I had 80 colonies last fall, and, for the first time for many years, I left all but 12 colonies on their summer stands. One of the 12 placed in the cellar, died of diarrhœa, and 8 of those left out died of the same disease, while 3 colonies starved.

For a number of years I have made a practice of ventilating each colony so that a circulation of air can be had through the hive. Those that died of diarrhœa were not so ventilated. My method of ventilation is as follows: The cap on top of the hive has two auger holes, covered with wire screen, directly opposite each other. The strip covering the front (or back) opening in the honey-board is left off. The entrance of the hive may be left entirely or partly open. Thus they are ventilated through the entire winter. When it is warm enough for the bees to commence flying in the spring, the honey-board should be closed. The circulation of the bees will cause a circulation of the air. If an inch auger hole is made a little above the centre of the front of the hive, I do not find it necessary to leave the honey-board open. I refer now to bees left on their summer stands.

A number of years ago, I had one of my apiaries in the country. I went out late in the fall to prepare them for winter. The only ventilation I intended to give them was through the entrance to the hive. I accidentally left the honey-board open in one hive, after taking off the surplus boxes, also left the entrance entirely open, and, in addition to this, there was an auger hole in the centre of the front of the hive. I did not visit the apiary again until spring. To my surprise, the hive I had accidentally left open was in, by far, the best condition of any of them; the comb being clean and free from mold, and scarcely any of the bees dead. The others were all, more or less, moldy; about one-third of the bees were dead, and all in a filthy condition. Since then, I have been more particular about ventilation, and have had much better results.

Experience has taught me another thing, and the 3 colonies that died from starvation, last winter, is only a repetition of my experience on former occasions. There were supplies in the hive, but the bees could not reach them. In the fall, the brood, and, consequently, the cluster of bees, were in the centre of the hive. The outside frames were filled with capped honey. As the winter advances the bees shift their location to one one side or the other, and in doing so they leave large supplies behind them, and when they have exhausted the honey on one side of the hive, they are too far from the bountiful supply on the other, to reach it during the cold winter.

The lesson to be learned, then, is this: The brood should be transferred in the fall from the centre of the hive to one side, and then their supplies will be accessible to them. I find it pays well, at this time (in the fall), to cut a small hole in the centre of each comb, that the bees may pass through, and not be compelled to pass around the frame.

Burlington, Iowa.

Colorado State Convention.

[Mr. Phil. Reardon, Jamestown, Colo., has sent us a report of the convention held at Denver, Colo., March 15, from which we make the following extracts.—Ed.]

In the absence of Mr. D. S. Grimes, the president of the Association, Mr. DeVinney called the meeting to order at 10 a. m. The morning session was informal.

Dr. Godfrey gave his experience in the care of bees. Among other things he spoke of the quietness of motion necessary. These insects hated quick motions, and the least betrayal of nervousness or fear, on the part of the keeper, would cause a disposition in the bees to sting the attendant, and it would be impossible for him to go near them. Kindness and gentleness, on the other hand, had a reciprocal effect on the inmates of the hives, and one could go among them and handle them without molestation.

The afternoon session convened at 2 o'clock, with Mr. D. S. Grimes, the president, in the chair. The election of officers resulted as follows: For President, Dr. Godfrey; Vice-President, E. Millison; Secretary, J. L. Peabody; Treasurer, Mrs. O. Wright.

A committee, consisting of the president, vice-president and secretary, was appointed to draft a new constitution and by-laws, the old regulations having been lost in the departure of the former secretary for California.

A resolution, to incorporate the Association under the laws of Colorado, was unanimously carried.

It was also decided that the bee-keepers, in connection with the Horticultural Society, should have an exhibit at the National Mining Exposition next summer.

An adoption of a motion then followed to the effect, that under the re-organization of the Association the fees of the old members, which were $1 a year, should be considered as paid, as the future tax of the Society will only be 50 cents per annum.

Mr. Peabody was appointed to confer with the Horticultural Society regarding a suitable exhibit of honey at the Colorado Exhibition, in August.

Mr. Millison said, at one time the people preferred imported honey to honey obtained from the Rocky Mountain bee plant. found so abundantly in Colorado. Time, however, had reversed the choice, and now the article obtained in this State was richer and purer than that found in any other part of the country. It was only now that people in Colorado were waking up to the fact that such excellent bee-food existed in the State. Something which might be cultivated more than it is here, was sweet clover. Under the influences of the climate it could not be surpassed for honey. Buckwheat, the gooseberry blossoms, wheat and oat bloom were fair, but did not do so well in the West as in the East.

Another member suggested that a wonderful thing about bee-food in Colorado consisted in a more flourishing existence in alkali soil than in other kinds of earth. Although irrigation was necessary for perfect growth, it was not needed so much in the cultivation of clover or other bee-food, as in the East, where a plant would dry up, from want of constant watering. Clover could also be sown at any time. A very curious and wonderful phenomena in Colorado was the honey dew, found on the leaves, branches and stalks of the box-elder, maple, and, especially, the cottonwood. Moisture, brought to bear on the dew, had a strange effect in bringing bees to the tree for food.

Some explained the origin of the dew to the kind of insect, which, by its pecking, brought the juice of the tree all over the leaves and stalks, and some asserted the fact was due to a certain influence of the atmosphere in bringing fluid deposits from other shrubs and plants. This honey dew was found on every tree in a greater or less quantity, and under proper conditions formed an excellent bee-food. Taking it altogether, no State in the Union equalled Colorado as a region for successful bee-culture.

A resolution to prepare a herbarium of bee-food, for exhibition next summer, and for permanent reference, was carried.

A motion was also carried to elect the president of the State Agricultural Society to honorary membership.

The secretary then read a list of colonies of bees, owned by members, with a comparison of colonies last fall and this spring:

	Fall.	Spring.
William Davis	15	15
W. H. Davis	7	7
DeVinney	15	14
E. Millison	..	65
D. S. Grimes	30	30
J. H. Love	29	24
J. L. Peabody	16	14
J. M. Clark	..	25
C. M. Chilcott	40	36
Dr. King, Boulder	..	100
L. Brock	20	19
J. W. Tallcott	6	6
J. W. Lamb, Durango	7	7

Adjourned to meet at the call of the president, next summer.

J. L. Peabody, *Sec.*

For the American Bee Journal.

"The Worst Kind of Advice."

DR. G. L. TINKER.

Hazardous language that, for a little friendly criticism. But Mr. Heddon proclaims it, and, as a matter of course, he is infallible on things appertaining to the honey bee!

Mr. Heddon cannot mean that his experiment "settles it," that a rack of the thin sections may not be set down on the brood frames and made a practical procedure? For it was not the same as the advice given, see page 151. Then, again, is it not strange that in his "experiment" the sections were glued to the bars of the rack so solid as to be removed with difficulty, with stings and dismay, when other bee-keepers have been, for years, taking off sections without trouble from racks having bars the width of the bottom piece of the sections?

But stranger still, Mr. H. found that the bees did not enter the sections "more readily" by direct passageways than "through a honey-board and two shallow air-chambers." His conclusion on this point, as on several others, looks "to a man up a tree" very like an argument for (if not an advertisement of) Mr. Heddon's "case or super method."

I have a number of hives now made on which to test the half-pound sections. To prevent soiling the tops of the sections, and to keep the racks perfectly clean, I shall use a permanent rack on the frames, to be left on during the honey flow, but which may be easily removed at any time if the frames on which it rests are straight and true on top as they should be. As Mr. Heddon did not make it clear whether the supposed difficulty he alluded to was in removing the sections as stated, or in taking off the rack, will he undertake to explain again?

Concerning the use of section racks in connection with a permanent rack, a noted bee-keeper, who has had large experience with the half-pound section, writes as follows: "It is the fastest, easiest and simplest way of handling comb honey we have ever seen."

By the plan advised, the shallow spaces usually allowed beneath the sections of from 40 to 60 cubic inches, that, in any case, must be constantly filled with idle bees before and after the sections are occupied, can be dispensed with and an undoubted advantage secured in obtaining surplus in the small sections. Yet, Mr. H. condemns the procedure, which looks to a larger, cheaper and more attractive production of comb honey, as "the worst kind of advice."

Finally, Mr. H. calls for the "apiarist who now adjusts his sections as advised." There are quite a number who practice a similar measure; among others, Mr. A. G. Hill, who places a row of sections "directly on the frames, saving the expense of a honey rack." Mr. Heddon can now send for that "missionary." There may be a prospect that he be not only reclaimed from infidelic doctrines, but that he may be able to place a higher value on that good old precept, "First cast out the beam from thine own eye, then thou shalt see clearly to cast the mote out of thy brother's eye."

New Philadelphia, O.

For the American Bee Journal.

How I Wintered My Bees.

F. A. BOHL.

I wintered my bees in the cellar on the following plan: My cellar is perfectly dark and well ventilated. I raise my hives off bottom boards, but not enough to let in the mice. I keep a barrel with ice, in the cellar. I took my bees out, on Feb. 28, and lost less than ever before, as I put a fresh lot of ice in the cellar the night before, which kept them quiet, and they did not come out and perish as usual.

I use the Gallup hive, 12x18 inches, inside measure, containing 12 Gallup frames, 10x11½ inches. I use honey-boards on top of frames, leaving about one-half inch space between them and the frames.

I have never used cloths on top of frames, as I can see no advantage in them; if there is any advantage in them, I wish some one would mention it in the BEE JOURNAL.

I obtained 1,100 lbs. of honey, last summer, from 17 colonies, spring count, besides increasing to 38.

My colonies are all stronger in bees now than they were in the fall. The hives are full of honey yet, and I intend to extract it as soon as the weather is fitting.

One swarm came out on Aug. 26, which filled its hive, and is as heavy as a man can carry now. One swarm came out, on June 15, which filled its box and yielded 100 lbs. of nice comb honey. I thought that was a large yield, but it does not compare with some reports in the BEE JOURNAL.

I intend to use sections, this summer, and sow alsike and sweet clover, as bee pasturage, I consider them the best for honey production.

Summum, Ill., March 8, 1883.

For the American Bee Journal.

Honey and Bee Show at Toledo.

DR. A. B. MASON.

DEAR JOURNAL:—I have just been throwing up my old hat and giving the regulation number of cheers, etc., ("in my mind,") for the officers of the Tri-State (Ohio, Michigan and Indiana) Fair Association, because they have adopted the following premium list for the bee and honey department, to be awarded at the next Tri-State Fair, to be held at Toledo, O., commencing September 10, 1883, and continuing one week.

BEES, HONEY, ETC.

DR. A. B. MASON, Superintendent.

ENTRIES IN THIS DEPARTMENT ARE FREE TO ALL.

	1st Pr.	2d Pr.
Display comb honey in most marketable shape, product of 1 apiary in 1883	$10	$5
Display extracted honey in most marketable shape, product of 1 apiary in 1883	10	5
Display comb honey in most marketable shape, by a lady, product of her own apiary in 1883	5	3
Display extracted honey in most marketable shape, by a lady, product of her own apiary in 1883	5	3
Comb honey, not less than 20 lbs., quality to govern	4	2
Extracted honey, not less than 20 lbs., quality to govern	4	2
Crate comb honey, not less than 20 lbs., in best shape for shipping and retailing	4	2
Colony of bees.	5	3
Colony of Italian bees	5	3
Colony of Syrian bees	5	3

Colonies of bees must be the progeny of one queen, and exhibited in such shape as to be readily seen on two sides. Purity of race, docility, size of bees, and numerical strength to be considered.

Display of queens, to be put up in such shape as to be readily seen by visitors (blacks not to compete)	$3	$2
Greatest variety of queens, put up in same shape as for display of queens	3	2

Queens and colonies cannot compete for more than one premium.

Bee-hive, for all purposes, in the apiary, may be represented by model, not less than half size	$3	$2 00
Bee-hive, glass	2	1 00
Wax extractor	2	1 00
Honey extractor	2	1 00
Foundation mill	5	3 00
Foundation press	5	3 00
Beeswax, not less than 10 lbs	2	1 00
Comb foundation for brood chamber, not less than 5 lbs	2	1 00
Comb foundation for surplus honey, not less than 3 lbs	2	1 00
Comb foundation machine, making best foundation for brood chamber, on the grounds	8	4 00
One-piece sections, not less than 50	1	50
Dovetailed sections, not less than 50	1	50
Package, with labels, for retailing extracted honey	1	50
Bee smoker	1	50
Honey knife	1	50
Package, for shipping extracted honey in bulk	1	50
Machine for making holes in frames for wiring	2	1 00
Machines for wiring frames	2	1 00
Display of apiarian supplies	3	1 00
Quinces preserved with honey	2	1 00
Peaches preserved with honey	2	1 00
Apples preserved with honey	2	1 00
Pears preserved with honey	2	1 00
Largest and best collection of bee-literature	2	1 00
Largest and best display of honey-bearing plants, properly named and labeled	10	5 00
Queen cage, such as is admitted to the mails by the postal laws	1	50
Honey vinegar, not less than 1 gallon	2	1 00
Honey cakes, with receipe for making	4	2 00

Last year, the amount of our premium list was $100, and this year it amounts to $208.50. The officers of the Fair association were so well pleased with our exhibit last year, that they adopted this list (prepared and "*staid by*," by the committee appointed by the Tri-State Bee-Keepers' Association) without a dissenting vote. They have also granted all exhibitors in our department the privilege of selling anything they may wish belonging to our specialty and in any quantity.

The Fair association offered to put up a building on purpose for our department, but the committee "declined the honor," believing it better to have our department among other appropriate exhibits, where the people are *sure to go* by thousands, than in a building by itself, where but few would go. We expect to have one or more tents on the grounds for the accommodation of such bee-keepers as come from a distance, and want to stay several days, where they can "camp out," and if they bring food ready cooked to last them during their stay, and a blanket, they can be "at home" at very slight expense.

We worked hard last year to make our exhibit a success, so we did not have to urge the Fair association very much to adopt what we considered a good premium list. I believe, if bee-keepers would do their part, there need be no fears but the different Fair associations would do theirs. Of course, the county Fairs cannot offer such inducements to our specialty as can these district and State Fairs, where thousands are in attendance every day.

I felt like congratulating Prof. Cook and his co-laborers over their success in getting the Michigan State Agricultural Society to adopt such a good premium list as was published in the BEE JOURNAL of January 24th last, and I am sure they will not feel hurt and give us "the cold shoulder" because we have "succeeded beyond our most sanguine expectations." It is all for the "common good."

A new feature that we have introduced is the offering of a premium for comb foundation machine, making best foundation on the grounds. I have invited Mrs. Dunham, Messrs. D. S. Given & Co., J. Vandervort and W. C. Pelham to be here with their foundation machines, and all have promised to be here, if possible. A. I. Root has also been invited and promises to be here if possible, but is not sure that he can bring a mill. I have also asked C. Olm to be here with one of his mills, but it is not time to hear from him yet. The prospects now are for a fine display, and a pleasant time among the bee-keepers.

Messrs. T. G. Newman, C. F. Muth, and James Heddon have promised to be here, and the Hon. I. N. Cotton, President of the Indiana State Bee-Keepers' Association, will represent Indiana on the awarding committee. Dr. Besse, President Ohio Bee-Keepers' Association, and Mr. Dougherty, Secretary, Indiana Bee-Keepers' Association, will "try to be" here.

I will gladly answer all inquiries in regard to our department, and send a premium list, with rules and regulations and entry blanks, as soon as printed, to all applicants. They need *not* "enclose stamp for reply," but should write name and address *plainly*.

Wagon Works, O.

For the American Bee Journal.

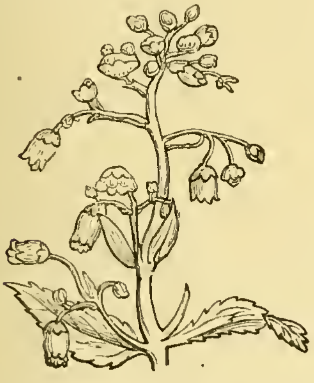
Simpson Honey Plant—Figwort.

T. ELLICOTT.

A great deal of bloom can be obtained from it the first year, by starting the plants early in the spring, in a greenhouse or hot-bed. A great many plants can be grown in a small space. I had some started in a greenhouse, last spring, and found that a thousand plants could be grown in a box 20 inches square, until large enough to transplant. It grows rapidly; some of my plants were over 6 feet high, the first season, and had a great many branches, from 2 to 3 feet long. I counted over 2,000 seed balls on a plant.

I set the plants, 2 feet apart each way, and think they require that much room, to do well. I sowed some seed in the fall and some early in the spring, in the garden, but none of the plants grew more than 2 feet high, and only had a few blossoms on them.

I believe, from the length of time bees remain on each blossom, and their eagerness to work on them, that it is a splendid honey plant. The shape of the blossom and its natural position on its stem, is such that it cannot be penetrated by rain, consequently the nectar cannot be diluted or washed out, and bees will work on them almost immediately after rain. They work on them all day long, when the weather is such that they can work, which indicates a continued flow of nectar, and I think adds a great deal to the value of the plant. It is easy to transplant, but requires a good deal of moisture to make the seed grow. I have no seed or plants to sell.



Simpson Honey Plant.

Fentonville, Mich.

[This plant, figwort (*Scrophularia nodosa*), is often called carpenter's square, because it has a square stalk. It is also known as rattle weed, as the seeds will rattle in the pod; heal-all, etc. It blooms from the middle of July till frost. Mr. J. A. Simpson, Alexis, Ill., first called attention to it as an excellent honey producer, and that gave it the name of "Simpson honey plant."—Ed.]

For the American Bee Journal.

Developing a Home Market.

A. J. HATFIELD.

Myself and son, having, at the close of the honey season of 1882, about 6,000 lbs. of honey to dispose of (4,800 lbs. being extracted), which would net us from 7 cents to 9 cents, as reported in Chicago, thinking we could do better by selling our own honey at home than to ship it, we determined to make an effort to do so, but later changed our plans somewhat, in that we arranged with several of the grocers of South Bend and New Carlisle to sell for us on commission, and in doing which have saved a nice profit above selling at wholesale.

To carry out our plans, we first ordered several hundred tin cans and pails, ranging in size from 1¼ to 2½ and 5 lbs., and after neatly labeling, we filled them with No. 1 extracted honey, preparatory to attending our county fair, to be held at South Bend.

Assisted by a good brother apiarist, we made an exhibit of comb and extracted honey, bee-hives, extractors, etc., that gave general satisfaction, as well as to put in five days of hard work.

We had hoped to have the privilege of selling honey at the fair, but could not do so, until the last afternoon, but our display and the few sales we were able to make, assisted in making many sales afterwards. We next proceeded to canvass the town, selling samples, which we had been disappointed, to a great extent, in doing at the fair.

Our friend above referred to, selling his comb honey, while our sales were almost exclusively extracted (our comb honey being sold by the crate, or left on commission with our grocers), and as sales were made, families were directed to our grocer where more honey could be had, and at same prices, when wanted.

When putting up honey in pails, full weight was given, and, in selling, the wholesale price of the pails was added to that of the honey. We also made arrangements with our grocers to pay the same prices for them if returned in good condition. This arrangement added materially to our sales, although but few were returned, still they expected to return them, at the time the sale was made. This, of course, could not be done in a distant market very well.

After selling up to Feb. 1, and supplying our grocers with what they might be able to sell, the remainder of the season, we still had some hundreds of pounds on hand. We concluded to try what could be done selling to the farmers in our vicinity, and our success has been very gratifying.

When extracting we stored the honey in stone jars, mostly 2 gallon jars; these we have been selling to the farmers at a little less price per pound than we sell in pails, it being something of a wholesale trade, and saved the trouble of liquefying the honey, to get it into pails.

At this time we have but little honey on hand, and I am satisfied we have laid the foundation for good sales in the future, and have introduced the use of honey into very many families that had not previously used it, and others, that had used it sparingly, have been using it quite largely, this winter.

Our experience has demonstrated that a pretty general effort in this direction would add very largely to the consumption of honey, and we should not read of overstocked markets, as at present. My friend, above referred to, in his canvass, probably sold some 200 lbs. of comb honey.

New Carlisle, Ind., March 7, 1883.

[This is the way to create a *market*, and lays the foundation for a large and increasing trade in honey every year. By getting a few hundreds of "Honey as Food and Medicine," and having the producer's name and address on the first page, will greatly add to the efficiency of the plans. Were bee-keepers to follow this plan of creating a market, we should hear no more of overstocking the markets with honey, and we should not only be blessing our fellow-beings by giving them a *pure* sweet, but be obtaining a much larger profit for the labor and care of the bees during the season. Let all try it.—Ed.]

For the American Bee Journal.

Clamp Wintering and Ventilation.

WM. BRADFORD.

In November last, I visited a neighborhood in Ontario, where the keeping of a few bees was quite common among the farmers. The modern system of bee-keeping, with its accompanying bee books and journals, had not penetrated the locality, and to have talked of brood frames and sections or foundation, queen-rearing and extracting, would have been like speaking in an unknown tongue, but burying bees for winter was quite a common practice, and, in one case, I saw the manner of doing the work.

The usual plan is, to dig a trench about a foot deep, and a little wider than the hives. Where I saw the work done, the soil was gravelly hardpan, and a pick was used to make the excavation. In the bottom of this trench, a couple of rails or poles, about 6 inches in diameter, are laid, with some 6 or 8 inches of space between them. The hives I saw, in use, were common box hives; some of them very large. The season, I was told, had been a very poor one for honey, and no boxes had been used on top for surplus, and it may be inferred that they were sealed tight at the top, and that there was no upward ventilation. They were placed on the poles as close together as they would stand, and without bottom boards. Straw is then packed on all sides and the top of the hives, and the whole covered with dirt. Provision is made for drainage, but none for ventilation.

My informant did not fear the attack of mice. He thought a mouse would have a hard time of it if he meddled with a hive. I was assured that the loss of bees, wintered in this way, was trifling, and that the consumption of honey was very small. The party referred to above, thought that 5 pounds would winter a colony.

The question of winter ventilation seems to be receiving a large amount of attention from correspondents. The views of Mr. C. J. Robinson, as to clamp wintering and ventilation, have gone the rounds of the bee papers, and I note with some surprise, the ardor with which his theories have been attacked by various writers. I assume that in saying, that in his clamps there was a partial vacuum, he means partial absence of oxygen, and not of all air or gas; and looking at what, I think, was the meaning of the writer, rather than at what he says, it appears to me that, possibly, profitable inquiry may be made in this direction. I do not know what the power of a bank of earth is to absorb carbonic acid, and to furnish oxygen in its place, and I have no authority to which I can refer in the matter, but I should not like to be shut up for many minutes in such a clamp as I have described above, after November rains had saturated the surface soil and frost had congealed and sealed it tight. I do not think that the air can long remain, such as an animal, requiring a full proportion of oxygen, could breathe with impunity.

It is apparent that in the matter of the proportion of oxygen and carbonic acid in the air they use, that the requirements of bees are different from those of most larger animals. Give a colony of bees a box, with from 1 to 2 cubic feet of space in it, and a round hole an inch in diameter for entrance, and they will seal up every other aperture air-tight. Then, with the circulation of air within impeded by the compartments into which the space is divided by the combs, and with these compartments filled with the living insects, they cannot only exist in a quiescent state, but they work, eat and breathe, and rear their young. The queen, with the tremendous strain upon her vital powers, involved in the performance of her functions, never seeks the stimulus of the purer outside air, but works contentedly in the midst of her clustering subjects, as do her progeny for days after they emerge from the combs. The growing young, in their cells, sealed and unsealed, are still farther excluded from the pure air, which we are disposed to think is as necessary to them as to us. The inference is plain, that they work without detriment, in an atmosphere highly charged with carbonic acid. That they can winter in an atmosphere similarly impure, needs no proof. The questions for inquiry are, how large a proportion of oxygen is necessary to their safety, and what influence, if any, has a large proportion of carbonic acid in reducing their activity, and the consumption of honey and conserving their vital forces. That there is proof that it does or can do this, I do not claim, but only that the negative is not established, and that it is not so improbable as to be dismissed without consideration. Bees, we have all seen reduced to a quiescent state by cold, and revive again without apparent injury. Frogs, and some other cold-blooded animals, in their winter quarters, furnish us examples of a torpid condition, with very trifling consumption of oxygen for long periods of time.

This subject, of upward ventilation, is a question of the safe disposal of the watery vapor expired by the bees, not of the carbonic acid. If all were known that can be known about the proper adjustment of a current of air through the hive for this purpose, it would still be a difficult matter to regulate properly in every case, with the varying strength of colonies, and would change outside temperature, and require great care, experience and skill. If a safe way of wintering can be secured, better approximating the natural method, by dispensing with this upward current, it would be worth searching for.

St. Lawrence, N. Y.

* * *

For the American Bee Journal.

Best Way to Market Comb Honey.

MRS. L. HARRISON.

Mr. E. B. Southwick expresses my feelings exactly, with reference to the one-pound section. Before this insignificant package was put upon the market, honey changed hands faster than it does now, and at a better price per pound, a five-pound package sold as readily.

I do not know what suits Eastern people, for I never interviewed them on the subject, but Western people, with their expansive views and capacious stomachs, desire a good square meal. A one-pound section is beneath their notice; cannot see it; their optics are too large to take it in. When they used to order their supplies, a box of honey included, it amounted to something; it could be cut out as needed, but they would be afraid that those little mites of honey would get lost—the children would carry them off to their play house.

I interviewed the dealers when they were selling the prize box, in this shape, a number of them were fastened together with little wooden strips, forming a long box, and the ends glassed. The reply was, "We do not want it in any better shape than that; it is good enough; a customer can take a whole box, or part, just as he likes."

We have always sold our honey in this shape, mostly to families, with this exception, our boxes are larger, seven of them weighing about 15 pounds. Consumers can take out the glass and cut out the honey as needed, and the remainder is safe from dust and insects.

I saw a shallow box of one-pounds, in a grocery, this week; it was uncovered, and some one had run against it, knocking the tiny things over, breaking them badly. If producers persist in putting pounds upon the market, they had better nail two of them together, then a consumer would be ashamed to ask a dealer to take off one.

Peoria, Ill.

* * *

Northeastern, N. Y., Convention.

The thirteenth annual convention of the Northeastern Bee-Keepers' Association was held in Syracuse, N. Y., Jan. 9-11, 1883.

After the regular routine of business, the topic, "Different races of bees," was introduced and discussed by Mr. Jones, his choice being the Holy Land bees. They are not so cross as the Cyprians, and they are better breeders than the Italian. He has had too few pure Cyprians to breed from to make a fair test of them. The Holy Land bees winter better, and are in every way superior to Blacks or Italians. They also gather honey earlier. The pure Holy Land bees, or cross between them and the Italian, using a Holy Land queen, produce one-third to one-half more honey than the pure Italian. Some may think the Holy Lands are too cross to handle, but they show the same determination to gather honey that they do to protect their stores. They are scarcely as large as the Italian bee, are quicker in their movements, and their hair is greyer; their color is lighter also than the Cyprian, and their rings are more of a lemon hue. All pure Holy Land bees were brought from Mount Lebanon and the Valley of Sharon. The Cyprians were nothing more than Holy Lands, brought about by being isolated. Italians came from Holy Lands originally.

Mr. Hoffman described a variety he imported from Germany, called the Caucasian. The docility of these bees is remarkable. Their comb and honey are far whiter than ordinary, and winter as well as any. They are rather dark, have silver-grey hair and narrow yellow stripes, and are not as thin and pointed as the Cyprian bee.

Mr. Jones, in answer to a question, stated that Holy Lands will not run off the combs like black bees. They will fill their cells full of honey, and are swifter and make longer journeys than any others. They will fly in 13 minutes the same distance that it takes the Italians to traverse in 17 and Cyprians 14 minutes.

Mr. Doolittle said he wanted to live in peace with his friends and bees, but found it impossible to keep on good terms with the Cyprians. He thought the Holy Lands as easy to handle when they had a queen as the Italians, but did not want any more Cyprians; his Holy Land bees made whiter honey than his Italians. Thought them detrimental, in breeding out of season.

Mr. Vandervort said the foreign races were too cross, and he got rid of what he had.

Mr. Houck said, the most he knew about the foreign bees was from reports received, had but very few reports favorable to Cyprians, and some good reports from the Holy Lands. Found the Holy Land bees nearly as gentle as the Italians.

Mr. Jones said he never saw any bees that could rob the Holy Lands; found they were no worse to rob others than other bees. Thought the Holy Land bees quite as hardy as the Italian or black bees. He said that queens reared in small nuclei did not give as good satisfaction as those reared in large colonies. He thought the time would come when a cent's worth of chloroform would serve for introducing a queen in any hive and at any time of the year.

Mr. Peet had seen queens introduced by first dropping them into honey and then putting them into the hive, and that the success of the method had given good satisfaction, as a queen was seldom lost by this process.

Mr. Jones explained his chloroform process as follows: Put one-half teaspoonful of chloroform on a sponge, place in a smoker, puff a little of the smoke into the entrance of the hive, and then drop the queen into the hive. He never lost a queen by this method.

The question of using half-pound boxes was warmly discussed, and a resolution was passed, "That it is the unanimous opinion of the Association that half-pound sections are not practicable or profitable to the producer at anything less than 40 cents a pound."

The topic of "Marketing our products," was taken up for discussion.

Mr. J. M. McCaul, of New York, addressed the convention. He wanted to interest every bee-keeper in the matter of awarding prizes, with the view of getting the producer to improve on the grading of his honey. He thought the paper boxes, used by Mr. Schofield, a great improvement, and the very best manner of putting up the one-pound packages of comb honey. The two-pound boxes should invariably be glassed and crated, 12 to a crate. The one-pound packages should be put up 24 to the crate. His opinion of the half-pound boxes was decidedly unfavorable to them. He did not want the trade to become so contracted as that, and advised bee-keepers not to use them, under any circumstances. Upon the whole, he thought the 5¼x5 inch box the best for the bee-keeper to use. Extracted honey for the New York market should be put up in firkins or small barrels, weighing from 150 to 175 pounds. They had no trade for extracted honey put up in small pails, but had a trade for glass bottles and jars. He would advise bee-keepers to put up their extracted honey, for home consumption, in small packages or pails.

Mr. Jones thought the best manner for putting up honey for the home trade and to increase the consumption of extracted honey, was to put it up in small packages. We must educate the people to use our honey in preference to the adulterated sweets, found on the market to-day.

Mr. Root thought that the Western bee-keepers had greatly injured our markets by putting their comb honey on the market without glassing. The Association should pass a resolution asking Western friends to glass what comb honey they put upon the New York market. He related his experience in selling extracted honey direct to the consumer.

Mr. L. C. Root read an able paper on "Extracting and curing honey," which was listened to attentively. He said that honey from Pompeii, 3,000 years old, was now in the British Museum, and is in a perfect state of preservation.

Mr. Jones said, there was not a doctor living who could produce a better remedy for colds and hoarseness than honey. An eminent Roman priest had found that Jamaica rum and honey mixed and taken in doses of one teaspoonful, taken very often, would cure the worst cold, coughs and consumption in its worst stages, which baffled our best physicians. Mr. Jones also gave the following recipe for preparing any kind of pail or bucket, no matter how musty, or of what material made of, so that it would keep honey perfectly: Take pure hot paraffine and coat the inside of the vessel. It would more than pay for all the trouble and expense. The cost was very little.

Aside from the formal proceedings common in all deliberative bodies—and short remarks from many different individuals, commenting on the essays read—the above contains about all the proceedings of interest to our readers, so far as we have received them. When the essays come to hand we shall classify them and publish through the year such as are best adapted to the immediate wants of our readers, and thus endeavor to give them "meat in due season."—*Bee and Poultry Magazine.*

Convention Notices.

☞ The Southeastern Michigan Bee-Keepers' Association will hold their next meeting at Adrian, Mich., April 18, 1883. All are invited. Reduced rates at hotel.

H. D. CUTTING, *Pres.*
Clinton, Mich.
H. C. MARKHAM, *Sec.*
Ann Arbor, Mich.

☞ The semi-annual meeting of the Western Bee-Keepers' Association will be held at Independence, Jackson County, Mo., on Saturday, April 28, 1883, at 10 a. m. Papers prepared for the occasion by the president, secretary and others will be read, and matters of general interest to bee-keepers discussed. A general attendance of persons interested in bee-culture is requested. The present membership of this Association control 2,000 colonies of bees.

S. W. SALISBURY, *Sec.*
Kansas City, Mo.
J. A. NELSON, *Pres.* Wyandotte, Kas.

☞ The spring meeting of the Cortland Union Bee-Keepers' Association will be held in Cortland, N. Y., on Tuesday, May 8, 1883.

M. C. BEAN, *Sec.*

☞ Quite a number of the leading bee-keepers of Missouri and Kansas met at the Court House, in Independence, Mo., December 23, 1882, and organized a bee-keepers' convention, which was named the "Western Bee-Keepers' Association," by electing the following officers for the ensuing year: Jas. A. Nelson, of Wyandotte, Kans., President; L. W. Baldwin, of Independence, Mo., Vice-President; S.W. Salsbury, Kansas City, Mo., Treasurer. The Association passed a resolution to invite all bee-keepers within a convenient distance, to meet with us at our next meeting and lend us their councils. Adjourned, to meet again at Independence, on the last Saturday in April next, at 10 o'clock, a. m. J. D. Meador, P. Baldwin, C. M. Crandall, *Committee.*

☞ The Central Michigan Bee-Keepers' Association holds its spring convention at Lansing, in the State Capitol building, on Tuesday, April 17, 1883, 9 a. m. Programme: President's address; Essays: Prof. A. J. Cook, on Wintering Bees; S. C. Perry, on Chaff Hives; C. Case, on Comb Honey; O S. Smith, on the Best Bee; A. D. Benham, on Extracted Honey; Mr. Harper, on Queen-Rearing; Mr. Waldo, on Best Method of Wintering Out of Doors, in Single-Walled Hives; E. N. Wood, on Sections; and E. Greenaway, on Comb Foundation. All bee-keepers are invited to attend or send essays, papers, implements or anything of interest to the fraternity A full attendance is requested.

E. N. WOOD, *Sec*
North Lansing, Mich.

☞ The spring meeting of the Western Michigan Bee-Keepers' Association will be held at Supervisor's Hall, Grand Rapids, April 26, at 10 a. m.

F. S. COVEY, *Sec.*
Coopersville, Mich.

☞ The Texas State Bee-Keepers' Association will hold its Fifth Annual Convention at McKinney, Collin Co., on Tuesday and Wednesday, April 17th and 18th, 1883; at the residence of Hon. W. H. Andrews.

WM. R. HOWARD, *Sec.*
Kingston, Texas.

☞ The Union Bee-Keepers' Association will meet in Grange Hall, Eminence, Ky., on Thursday, April 26, 1883. All bee-keepers, and the public generally, are invited to be present.

G. W. DEMAREE, *Sec.*
Christiansburg, Ky.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

SELECTIONS FROM OUR LETTER BOX

Moldy Combs.

I have some combs badly mildewed, can you tell me how to get them in good condition again? A party, who has kept bees for 6 years in Colorado, told me that he took off 7 tons of honey from 150 colonies, and that the average is 200 lbs. per colony.

PHIL. REARDEN.

Jamestown, Colo., March 17, 1883.

[The bees will clean up the moldy combs, if given them, one at a time, in spring.—ED.]

Bees Confined 130 Days.

The bees have been confined since Nov. 13. I put 23 colonies in the cellar, and left 7 out, 3 of them were floated some distance by water being dammed up, in the snow, about the first of February. I expect some loss from those that have had no flight yet; the thermometer is down to zero every morning, and we have snow drifts from 3 to 15 feet deep. Those in the cellar seem to be all right, yet some are getting a little uneasy. 130 days without a flight, who can beat that?

PERRY MCKAY.

Spofford, N. Y., March 23, 1883.

Matrimony Vine, Etc.

Last season was a pretty good season for our "pets;" crops of all kinds have yielded well; but just how well bees could have done, cannot be said, from the fact that there are no practical bee-keepers, to my knowledge, in this section of country, the bees being kept by farmers, in box hives or the cottage bee-hive, a patented concern, worse than a box hive. I have 2 colonies, one good and strong, the other rather weak from the effects from dysentery. I put my bees in the cellar, Dec. 1, 1882. One colony became very uneasy the beginning of February; every few days a large quantity of dead bees accumulated on the bottom board; the hive became very damp. I bored a hole in the top of the hive, and they became more quiet (after boring the hole, I laid a bunch of wool on the top, to keep the bees in), with fewer dead bees, till Feb. 15, when we had a pleasant day, but much snow was on the ground. I brought the affected colony up, let them fly out, and returned them to the cellar; this cured them; there were no more dead bees nor dysentery, but the colony is weak from disease, and bees perished on the snow, the day I let them fly. The bees are the common black bees, which I captured in the woods last August. I found 4 bee-trees; the bees I united into 2 colonies, let them build comb, then bought "wild honey" and fed them up for winter quarters. I now have them on their summer stands, doing well. The elms are yielding pollen at present. I think I will make a practical apiarist, for I "fill the bill" exactly, as given by Dr. C. C. Miller, in February number of the BEE JOURNAL. Yes, I not only lay awake at night; talk about bees so much, that my wife and children also talk about bees in their sleep, and take as much delight in the honey-bee as I do. When the proper time arrives, I shall transfer them to some movable frame hive. In the meantime I will content myself with reading the BEE JOURNAL and the A B C in Bee-Culture, etc., and build up an apiary as fast as my means and experience will admit. Please give a description of the matrimony vine, as spoken of by Wm. Stolley, of Nebraska, in the BEE JOURNAL, and give its botanical name.

Fulton, Mo. D. R. PHILLIPPS.

[The matrimony vine, *Lycium barbarum* belongs to the order *Solanaceæ*, which includes the potato, tomato, night shade, horse nettle, ground cherry, bitter sweet, egg plant, etc. It is easily propagated by layering.—ED.]

A Long Winter, but Bees All Right.

Bees have had a long winter, but mine are all right yet, and I think it is the same in this vicinity generally.

L. M. ROBERTS.

Fort Atkinson, Wis., March 28, 1883.

Used 80 Bushels of Chaff.

I have kept bees for 30 years, and once thought I knew all about them, but have since found that I knew but little. Wintering bees baffles me yet. I think Mr. Heddon is right in his pollen theory. If one tries all the plans of wintering, he will have no time for anything else. I have used 80 bushels of chaff this winter, and have bees prepared in five different ways; some are in the cellar, some in cold frames, some with pollen and some without it. One colony, having no honey. I fed till Feb. 10, when the bees all died, as it was too cold to feed, 10 degrees below zero.

Nineveh, Ind. W. D. SMYSER.

All Hopeful—Bees have Wintered Well.

Bees have generally wintered well, and we are all hopeful, but can hardly expect another such honey season as the last.

J. L. WOLCOTT.

Bloomington, Ill., March 27, 1883.

Lady's Report for Two Years.

The terrible winter of 1880 made sad havoc with bees here, as elsewhere, and of the 47 fine, strong colonies, so carefully packed in the fall, June 1, 1881, found us with bees in but 9 hives, and of these, only 5 colonies were thrifty. We equalized bees and brood, and felt we had but a poor start for the season. Were not discouraged, though things went somewhat askew. I did my work alone for a family of 7 to 9, till the middle of September. Mr. Parsons was seriously ill the entire month of October, and a part of November, and Nov. 1, the "champion queen" of the county, our "daughter Mabel," took up her abode in our home. "Blessed bees" failed to receive all the attention they could have endured that summer, but our expenses were only 75 cents, and recompense 278¼ lbs. of salable comb honey, and 175 lbs. of extracted honey; the wax I had to let go. We obtained 20 cents per lb. for comb honey, and 15 cents for extracted honey. Some of the 1880 crop also brought 20 cents, thereby bringing the average price of that year's crop to 18 cents per lb. I packed the bees, which had increased to 13 colonies, on the summer stands, in building paper and boards; they were left in summer hives, with sections at sides and above them. (We were too ill to do more for them.) They came through the winter, 9 colonies being strong and thrifty. Our expenses, this year, were $6.25, and recompense 1,113½ lbs. of salable comb honey, 354 lbs. of extracted honey, and 10 lbs. of beeswax. The stock increased, by natural swarming, to 23 colonies. They are on summer stands; some in summer hives with straw in ends of hives and covers; some in winter hives with division-board at each side of the frames, and straw in the covers. All are encased in building paper and boards, and are well banked at the front and back; have good board roof with tar paper roof over it, lapped well over the edge of the roof boards at each side; have 35 lbs. and upwards of early made, well-capped honey, and we hope for the best. All are now quiet, and I find no indication of frost at the entrances of the hives. We have had steady, cold weather and good sleighing since Thanksgiving day; the mercury having fallen as low as 16° below zero; that is the extreme.

MRS. MYRA L. PARSONS.

Linwood, Mich., Feb. 6, 1883.

Red Clover, Italian Bees, Etc.

In the report of the Maine convention, in the BEE JOURNAL of March 7, page 123, I am made to say that I "had often observed black bees on red clover, but no Italians." It was not me, but another man who said that. I have been looking, during the last three summers, to find bees gathering honey from red clover; having partially Italianized my black bees, with that end in view, there being lots of red clover about here, with piles of honey, as well as money, in it; yet, never have seen the first honey bee, either black or Italian, gathering honey from red clover. I have seen them buzzing around and over it, but when they settle, they invariably alight on white or alsike clover, or some flowers beside red clover.

Were I to offer 50 cents ahead for all the honey bees found gathering honey from red clover about my locality, I do not think I shall be called on for the first 50 cents.

So far as my experience goes with Italians, they are poor comb builders, that is, they make it uneven. My Italians produced dark comb and dark honey; at the same time, the blacks were producing white comb and white honey, that sold from 2 to 3 cents per lb. more in market than that put up by the Italians.

I think the quantity stored by my Italians about equal to that stored by my best blacks, but my hybrids stored more than either. The quality of that put up by the hybrids, seems to be a mixture of the two.

I think the Italians are a little more prolific, and more liable to dwindle, but, when putting up white comb honey for the market, the black bees carry off the palm with me. Whether the Italians do better in their own native hills, I cannot say. There should be some great exhibition, where all can compare combs, and see for themselves. I think if Maine men would take more pains to improve their own bees, they might make a great saving in time and money.

JOHN REYNOLDS.

Clinton, Maine, March 21, 1883.

Rainfall in California.

Quite a mistake appears in the Weekly BEE JOURNAL of Feb. 28, under the heading of "Scarcity of Water in California." On Feb. 5, I reported the rainfall, so far this winter, 2½ inches; but in the BEE JOURNAL it reads 22½ inches. If we had that much rain, we would not now be complaining of drouth. Since my communication of Feb. 5, we have had 3½ inches more of rain, making 6 inches for this season. There is little probability of getting much more rain this season, consequently the outlook for surplus honey is not encouraging, although the bees are now doing well, working on the *Alfilerio* (pin grass) and sycamore. I have noticed that everything that has bloomed, up to date, is very rich in nectar. What the future will bring, is yet unknown.

J. E. PLEASANTS.

Carbondale, Cal., March 19, 1883.

[True; that was quite a mistake, and we wonder that it was not discovered. We try to avoid mistakes, but perfection does not yet exist in mortals.—ED.]

Lost 2 Out of 83 Colonies.

The spring here is cold and backward; bees are not in very good condition, generally, as far as heard from. Some have about one-fifth left; mine are in good condition yet; I lost 2 out of 83; but we are not out of the woods yet. A. D. BENNETT.

Janesville, Iowa, March 26, 1883.

Beginner's Satisfaction.

I commenced in the spring of 1882, with 2 colonies, and increased to 9. I bought a few at $3.35 per colony, in box hives, which I will transfer to movable frame hives. I formerly lived near Mr. Hill, of Kendallville, Ind.

Edna, Kans. W. E. POTTS.

No More Loss than Last Winter.

Bees are wintering fairly here, notwithstanding the severe winter, and I do not think the per cent. of losses will exceed that of last winter, unless very unfavorable weather should intervene between this and warm weather. I have about 20 colonies packed on their summer stands, while the balance are stowed away in the cellar, to remain until the weather becomes warm enough to justify their removal. CHAS. S. BURT.

Brecksville, O., March 26, 1883.

Moving Bees.

I have 2 colonies of bees, in the cellar. I wish to move them 10 miles on the 11th of May. I cannot move before. Will it injure them, or be the cause of many being lost? It is where I kept them last season. Please give best plan of setting them in wagon, and of preparing for the journey.

Port Elgin, Ont. BEGINNER.

[By that time it should be warm enough to move them with safety. Put them in a spring wagon, with frames running across the body of the wagon. For manner of preparing them, see directions given on page 77 of the BEE JOURNAL for Feb. 7. 1883.—ED.]

Stimulative Feeding.

The question is often asked, about this time of the year, how shall we keep our bees quiet in the cellar, and yet have them breed up until we want to put them out? We will suppose that your bees were put into a warm cellar last fall, and are in a healthy condition, and that each colony has plenty of stores. Now place near the entrance, or at any place where the bees can get at it, and it will not leak or run into the hives, a piece of ice, and, as often as it melts, replace it; the longer it is used, the more they will require. I prefer ice to water, as water takes up the poison that is in the atmosphere, and the ice will keep the air more humid; in this way I have increased ordinary colonies two-fold by the time they were set out on the summer stands. Do not give ice more than 4 or 6 weeks before putting them out in the spring. Then take a frame of honey and place it in the center of the brood-nest (if the colony is strong enough to move the honey out of the comb and not chill the brood); make the hive as warm as possible, and, if the weather is cold, close the entrance to quite a small one. As soon as sufficient bees are hatched, which will be according to the strength of the colony, place another in the center, and so continue until flowers secrete honey, so that the bees can get plenty to use each day (if you have no honey in frames, put the feed in the empty frame by pouring it from a distance above, in a small stream), then place in the center, the same as a frame of honey; as the bees move the honey or feed from the comb, the queen is sure to fill it with eggs, and the bees will feed the young. When honey comes plentifully from the flowers, place empty frames of comb in the center of the brood-nest. If, at any time, for any reason, honey should cease, and there is none in the center of the hives, immediately place combs, filled with honey or feed in the center of the brood-nest. If these rules are observed, bees will continue to rear brood until the main honey crop comes, when you will have to see that the bees do not crowd the brood-nest with honey. Colonies that are too weak to work thus, should be fed, using some kind of a feeder that will not let out any of the original heat. No matter how much honey the colony has, if it is weak, feed it. I cut a hole through the quilt, over the cluster of bees, and place the food in a feeder, made thus: Make a tin cup, 2 inches deep and 2½ inches in diameter, without top or bottom, and another that will just squeeze into it, without top or bottom (the inside cup should be 3 or 4 inches deep): place the cotton cloth over the largest cup, squeeze the other into it, until it comes within ½ inch of the bottom; now you have a cup without top or bottom, with a partition ½ inch above the bottom. Wet the under side of the cloth with the food, so as to attract the bees; set it over the hole in the quilt, put in the food, quite warm, at a certain hour each day, and feed just what they will use. I have used the above feeder for 15 years, with the best of success.

W. H. B.

Oran, N. Y., March 27, 1883.

Bee-Keeping in Minnesota.

We have been having a cold, long winter, 41° below zero was the lowest, and 42° above zero was the warmest, up to March 14, and still we are having cold spells. The thermometer, this morning at 6 a. m., showed 12° below zero. I set out 130 colonies of bees on the 14th inst., which I wintered in a double-walled bee-house, but the weather was hardly warm enough for bees to take a fly (which they needed badly); a large number of them dropped on the snow and could not rise again. It was 43° in the shade, and 60° on the south side of buildings, in the sun, above zero. Cold winds have been prevailing for the past three days, with from 2 to 2½ feet of snow in the woods, and north side of hills, which is hard enough to walk over anywhere. There were about 2½ bushels of dead bees on the floor of the bee-house, though, with the exception of a few colonies, they are in splendid condition; most of them have consumed but little honey, and the combs look nice and clean; also there are plenty of bees. My 30 colonies, which I wintered out of doors, came all through safely; they were packed with chaff, on the south side of the building; and were covered with 1½ feet of snow for over 2 months; then the snow melted between the hives and the top of the snow; as it was too warm and damp for the bees, I cleared it away; the coldest weather was over, too. I have no cushions on top or anywhere, and left the entrances, on all my hives, open the whole width, but made holes through the combs, last fall, for passages. Nearly all bees in this vicinity, as far as I have heard, are dead; their keepers gave them no protection. I have not lost any out of 160 colonies, so far, this winter. I believe a ball of snow on each entry, in portico, is a good idea, as Mrs. A. B. Winder (on page 139) has stated. Where bees are kept in a temperature from 40° to 45°, through the winter, they seem to get dry, and are in need of water, towards spring. Mine have been kept on the above temperature, and, although, in a healthy state, they have been very uneasy for the past month, and a great many came out, probably in search of water, and dropped on the floor. I could not think of such a convenient and practical way to water my bees, like Mrs. Winder, and when the Bee Journal, with its precious contents, came to hand, it was too late for my bees, as I had them out, already. H. M. Morris, on page 145, refers to my experience. Here, corn does not yield honey every season; at least, not enough to notice. I have only experienced 2 seasons in 8, that my bees gathered large quantities of honey on corn. Some years I could hardly see a bee visiting the corn, while in bloom, with large fields close by the apiary. Corn honey is the very finest and best that my bees gather.

C. Theilmann.

Theilmanton, Minn., March 19, 1883.

Fruit Trees Killed by the Frost.

I have now set a part of my bees on their summer stands. I lost 3 out of 60. I am now satisfied that they will winter in this cold country, packed in sawdust, without freezing. The past winter has been the coldest one on record in Iowa. Many apple trees froze so hard that it will kill them. I had 150 trees that had been bearing; all were killed but 5. Where trees are planted on high ridges, probably only about one-fourth are dead.

H. C. Clark.

Palmyra, Iowa, March 26, 1883.

Tight Top Bars of Frames.

I wish to say through the Bee Journal that I have been using the American hive, improved to suit my own notions, and I find it very convenient; and the alteration is in cutting the hive down to 15 inches in length, also varying the pitch of the bottom board, shortening the frames and making them 11¾x11½ in the clear. The top bars of the frames fill the hive, over the top, leaving 3 inches closed at each end of the frame, then cutting 3 inches, ⅜ of an inch in width, at each side of hive, leaving 2 inches closed in the centre; then the quilt is placed on top, pressed down with a thin board, till the time of putting on my racks, which hold 12 two-pound sections. And as this rack of sections is filled, I raise it up and put another under, and as long as there is a flow of nectar, the bees keep filling them; here is one advantage of the closed frames, concentrating the heat and throwing it immediately into the surplus box, where you cannot get too much, as long as it arises from the bees; the next advantage is in economizing the labor of the bees, in regard to gathering propolis, where they could as well be gathering honey, and would be, if you had frames with closed top bars for 3 inches at each end. I have never handled open or narrow top frames till within the last two years; in this length of time I have handled quite a number, for my neighbors, and in those I have opened, I find more propolis in one hive than in ten of mine, that have closed frames. I believe if the labor of the propolis-gathering was spent in honey-gathering, it would make from 5 to 10 pounds of honey to each strong colony, which would be of some account, while the propolis is of no account to you or to the bees, while packed between the frames.

R. Corbett.

Manhattan, Kans.

American Hive, Honey Vinegar, Etc.

Please give the proper dimensions of the American hive and frame, as I find there are several sizes in use in this vicinity. Also please give the dimensions of frame to fit extractors marked for 13x13 inches. My frames are 12½x11 inches, with 14 inch top bar, with cross bar in the middle, consequently are built down to from 12 to 13 inches, and I find the long ones are set on the bottom of the basket, and slip about at the top, and occasionally the top bar strikes the can.

In the Bee Journal, page 143, Mr. W. Z. Hutchinson gives us Mr. Bingham's plan for making honey vinegar, which he says was good. We made some last fall from the washings of vessels, after extracting. The honey was first-class, smartweed honey, but the vinegar had a sickening taste about it, and the only way we could use it was to mix it with sorghum vinegar, the kind we were using. Does honey vinegar usually have such a taste?

Joseph Beath.

Corning, Iowa.

[The American frame should be 12x12 inches, but that hive has had so many changes, and been *varied* by so many that use it, that it would be difficult now to determine a standard size for it. Mr. King does not give any size for it in his new Text Book.

As your frames are 12½ with a 14 inch top bar, an extractor, with comb basket 13x13 inches, is just the thing; the ends of the top bar will rest on the top of the comb basket.

We never heard of honey vinegar having a sickening taste, though we have used considerable of it.—Ed.]

Queens Reared in the South.

On page 141, G. M. Doolittle writes that he has a colony of bees to which he gave a Texas queen last June, that they were the first to show signs of dysentery, that they were nearly all dead, and what remained were in a deplorable condition. As I have been thinking of sending to Texas for queens, this spring, I would like to ask Mr. Doolittle if he thinks bees, from a queen reared in the South, are as hardy and well able to stand the long, cold winters of the North, as those from a queen reared here? It seems to me they are not, but I may be wrong. I merely ask for information. It is true we can get queens earlier and cheaper, but will it be advisable to send there for them? I would like to hear from any others who have had experience with Southern queens.

T. S. Johnson.

Bogart, O.

Hints About Rearing Drones, Etc.

Professors Siebold and Leuckhart were right; drone and worker eggs are not alike, yet they are all fertilized by the male bee. The queen has nothing to do in fertilizing her own eggs, when laying. A queen is like all other winged insects; not like frogs and fish. The drone does not accompany the queen when she is laying. When they want drones, the whole colony engage in the work; the same in rearing queens. Bees make drones and queens, when they want them; it is the workers that regulate the laying, not the queen alone. Bees never eat nor remove eggs from one cell to another; they can destroy eggs when they desire, but never eat them. Bee-men should be careful about importing new kinds of bees, and not let the drones fly, until proved to be better than any we now have, for they may do a great deal of damage. Cyprian drones fly faster and farther than Italians. I think Italians are better then any I have yet seen, for honey-gathering.

Delhi, N. Y. John McCandlish.

Bees Strong and Healthy.

I removed my bees from the cellar, where they have been confined for 135 days, and they had no flight for 10 or 15 days before they were put in the cellar. The bees never wintered better.

J. J. Hurlbert, 40.

Lyndon, Ill., March 30, 1883.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Transferring Bees, Etc.

Will Mr. Heddon please answer the following questions through the "How and What" department of the Bee Journal: I have 8 colonies of bees in box hives, which I wish to transfer to frame hives, this spring, according to your "Progressive Method" (published in No. 28 of the present volume of the Bee Journal), but I do not understand the method fully. You say: "With smoker, drum box, etc., drive a colony from the 'old gum' into the frame hive, filled with foundation. After 21 days the worker brood is all hatched, and a new queen, just begun to lay, in the 'old gum.'" "Now, I can unite with my first drive."

2. How do you manage to catch the young queen, to keep her from going into the frame hive and raising a row with the queen already there? If I can catch the young queen, I would much prefer this method to the old one. Do colonies, so transferred, have to be fed for a few days?

3. What are the distinguishing

marks of a brown German queen ?

4. Can a queen-cell be safely introduced to a colony rendered queenless, and how should it be done ?

ROBERT L. FREDERICK.
Riverton, Va., March 26, 1883.

[1. After the bees are above in the drum-box, before you put them with the first drive, shake them down on a flat board or sheet, and while they are running into the box, or a decoy hive fixed for the purpose, look them over, find and pick out the queen and kill her. There is no easier method of finding queens than this.

2. We do our transferring during a honey flow, and have never yet fed the new colony. Were we compelled to do it at other times, we should feed, of course.

3. The brown bee differs from the smaller black bee physically, to the observation, as follows : She is larger every way, lighter-colored, and more hairy or downy, than her smaller black cousins. In qualities, her points of superiority are vastly more marked and numerous. Queens differ from each other in appearance much the same as the workers, though not to as great a degree.

4. About six hours after making the colony queenless, insert the cell, by cutting a V-shaped hole in one of the central combs, in which insert the cell, which is held in place by the V-shaped piece of comb attached to it, if you cut it out properly. I have stuck the butt of cells to a piece of section honey box, and hung them down between the top bars with success, but the first named plan is the safest.—JAMES HEDDON.]

About a Location.

1. Allow me to ask about the right kind of a location to keep bees. Would a prairie place do, say 1 mile from timber, with no running creek or branch in 1½ miles, but weak springs of water nearer, with well on the premises ?

2. Do bees require an abundance of water, and do the winds blowing, on the prairies, disturb their working or destroy them ?

3. Will bees do well with land in cultivation, a mile in each direction ?

4. Everything else being desirable, or even sufficient as a location, would 15 miles from market or railroad be too far to succeed well, where one wants to make the business profitable ? Bear in mind this is Texas, with sometimes long, dry summers, and high winds in the spring, especially.

Salado, Texas. W. P. HANCOCK.

[1. Yes; many succeed with far greater disadvantages.

2. Bees use considerable water, but will find plenty in your locality. High winds are unfavorable, but not enough so, as to prevent success in windy locations.

3. Yes.

4. No ; honey is a commodity that possesses much value in small compass, and weight.

Tiering up Sections, Etc.

1. I am a beginner, and would like to know how to put on sections ; horizontal or "flat" as quoted in price lists of Bee-Keepers' Supplies ? I use 4 lb. boxes, 5x6x2 in cases ; 18 sections in 8 frame, or 21 in 10 frame Langstroth hive.

2. What is the best way of using more than one high, or tiering up ?

3. Is there more than one method, horizontal and perpendicular ; how are the sections held, and how many tiers high ?

4. Are wood separators better than tin ones ? J. SHORTT.
Oak Centre, Wis.

[1 and 2. I would first advise the use of one-pound sections, in cases similar to the one illustrated on page 659 of the BEE JOURNAL for 1882. The tiering up process is then very simple and practical. There are other methods, but the one referred to is my choice, which is the reason why I now use it ; 5x6 sections could be adjusted in the same manner.

4. A majority seem to think they are minorities, and very small ones at that, have so often been found to be correct, that I shall test the matter of tin *vs.* wood separators thoroughly the coming season.—JAMES HEDDON.]

Shipping Crates.

What is the best size for shipping crates for the large markets ?

MERITT BLANCHARD.
Sherwood, Wis.

[In answering the above question, I shall differ from many. I use, and prefer, a small crate, which holds 12 sections, 4¼x4¼x2 ; 14 sections, 4¼x4¼x1¾ ; 21 sections, 4¼x2 13-16x1¾ ; 24 sections, 4¼x2 13-16x1½. The last two being half-pound sections, to be used with and without separators, respectively. I have found the advantages of a small crate to be these : The honey is not as liable to be broken in transit ; they take in a large proportion of retail trade, and in a wholesale way.—JAMES HEDDON.]

Errata.—On page 156, in my answer to Mr. Scofield's questions, 3d reply, make a full stop at "disease," and thus change the meaning. It is a double reply. In 5th answer, between "for" and "advertising," put the little word *not*, and thus reverse the meaning.

Dowagiac, Mich. J. H.

[The errors were in the copy.—ED.]

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., April 2, 1882.

The following are the latest quotations for honey and beeswax received up to this hour :

Quotations of Cash Buyers.

CHICAGO.

HONEY—The nominal price of extracted is 7c. for dark and 9c. for light—here. The supply is abundant and sales are slow.

BEESWAX—None in the market.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—There is no excitement in the honey market, but sales are fair to our regular trade. Offerings are plentiful of extracted and comb honey. Extracted brings 7@9c. on arrival. The sales of comb honey are very slow, although there is a large supply of first-class quality on the market. It brings 12@18c. on arrival.

BEESWAX—Comes in slowly and brings 20@30c per lb., according to quality. CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The past month has not reduced the stock of comb or extracted honey, the receipts having been larger than the amounts taken for consumption. Prices are weak and irregular, ranging from 16c. to 18c. for white comb in the smaller frames ; dark, very little selling, offered at 12½c. to 14c. Extracted, 8c. to 10c., according to color.

BEESWAX—None in the market.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—All stocks of choice honey in this market, either comb or exracted, have been closed out. Present offerings are confined to second and third grades, and are not large. Were there any desirable qualities now here, they would doubtless meet with ready sale.

White comb, 14@17c.; dark to good, 11@13c.; extracted, choice to extra white, 8½@9½c.; dark and candied, 5@7½c.

BEESWAX—We quote 30@33c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Very quiet ; dull. Comb at 14@16.—some inferior sold at 10c.; strained at 6½@7c., extracted at 7½@8½c., lots in small packages more.

BEESWAX—Scarce and wanted at 33@34c.

W. T. ANDERSON & CO., 117 N. Main Street.

CLEVELAND.

HONEY—Is a little lower, and at the lower price it has moved off a little better of late. 1-lb. sections of best white sold at 18½@19c.;, second grades, 1-lb., 17c.; 2-lb. sections a little slow at 17@18c. Extracted very dull at 9@11c.

BEESWAX—None in market.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—Our supply is gone; we have none to quote.

CROCKER & BLAKE, 57 Chatham Street.

Special Notices.

☞ Attention is called to the advertisement of D. C. Talbot & Co.'s Comb Foundation Fastener, on page 184.—*Adv.*

☞ I desire to say to those who have ordered my book, that we are now sending out 50 copies each day, and will continue to do so until every order is filled. H. ALLEY.
Wenham, Mass., March 30, 1883.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts each, or $8 per 100.

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1 year, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with $6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For four subscribers, with $8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with $10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

◆

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

◆

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

◆

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

◆

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

Bees for Sale!

200 or 300 colonies of Italian bees, in Langstroth hives, in good condition. Price: Single colony, $6.50; ten or more, $6.00 per colony. Hybrids, 50 cents less. I will guarantee safe arrival.

C. GRIMM,
14A6t Jefferson, Wis.

WOOD SEPARATORS!

PRICE LIST of the Besse Wood Separators: For the wide Langstroth frame, per 100, 50c.; per 1000, $4.00. They are of basswood, size 17½x 3½x1-16. Any size to order. Send 3 cent stamp for sample.

12A3t **DR. H. BESSE,** Delaware, Ohio.

BEE KEEPERS' SUPPLIES!

Simplicity and Chaff Hives, Queens, etc. Send for Circular. Address,

HOWARD NICHOLAS,
12A4t 4B1t **Etters, York Co., Pa.**

FARMS Wanted for Eastern buyers. Stamp for information. S. P. BROCKWAY, Times Building, Chicago, Ill. 12A4t

100 COLONIES ITALIAN BEES,

FOR SALE,

also, queens and nuclei. Will exchange for Jersey heifer, pair Poland China pigs, or Plymouth Rock fowls. Write for prices.

C. WEEKS,
11A4t Clifton, Wayne Co., Tenn.

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SIMPLICITY HIVES!!

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Send for descriptive circular.

A. D. BENHAM,
10AtfB1t Olivet, Mich.

SEND POSTAL for my 20 page price list of Italian, Cyprian and Holy Land bees, queens, nuclei and apiarian supplies.

H. H. BROWN,
13D3t Light Street, Col Co., Pa.

COMB FOUNDATION.

Owing to the scarcity of beeswax, the prices of comb foundation will hereafter be as follows:

	Dunham.	Thin.	Extra Thin.
10 lbs. or less.	55c.	65c.	72c.
25 " " ..	54	64	71
50 " " ..	53	63	70
100 " " ..	52	62	69

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Z. K. JEWETT, Nurseryman,
11A4t **Sparta, Wis.**

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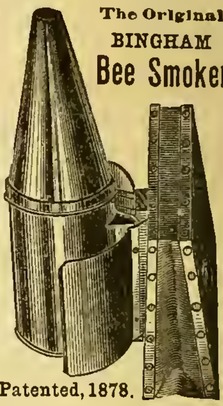

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Large Bingham Smoker (wide shield), 2½ inch	1 50	1 75
Extra Bingham Smoker (wide shield), 2 inch..................	1 25	1 50
Plain Bingham Smoker, 2 inch....	1 00	1 25
Little Wonder Bingham Smoker, 1¾ inch	50	65
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To sell again, apply for dozen or half-dozen rates.

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BINGHAM & HETHERINGTON,
17ABtf **Abronia, Mich.**

IMPORTANT TO BEE-KEEPERS.

Our new circular and price list of queens for 1883 contains 32 pages and is illustrated to show our new way of rearing-queens. Send your address on a postal card for it. Our new book (175 pages) on

QUEEN REARING

is now ready. Bound in cloth and sent by mail for $1.00. Those who desire may remit on receipt of book.

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PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

D. S. GIVEN & CO.,
1ABtf HOOPESTON, ILL.

W. Z. HUTCHINSON,

Rogersville, Genesee County, Mich.,

has made arrangements to receive Italian queens from the South, early in the season. The queens will be bred from imported mothers, reared by a thoroughly competent and reliable breeder, and, upon their arrival, they will be introduced to nuclei, until needed in filling orders. These queens will be shipped as soon as it is warm enough in this latitude, probably about May 1st, and they will be used in filling all orders for untested queens until about June 15th, when queens reared in the home apiary will be ready to ship. Before June 1st, untested queens will be $1.50 each: during June, single queen $1.25, or six for $6.00; after July 1st, single queen $1.00, six for $5.50, twelve for $10.00. Tested queens (reared last season in the home apiary), before June 1st, $3.00 each; during June, $2.50 each; after July 1st, $2.00 each. Safe arrival guaranteed. Make money orders payable at Flint, Mich. 14Dtf

The Excelsior Smoker Co.'s Cold Blast gets away with all of 'em. You can handle the most vindictive colony without veil or gloves. Send us $1 and try it. By mail, postpaid. Address W. C. R. KEMP, Manager, Orleans, Ind. 14D3t

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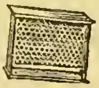

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J. VAN DEUSEN & SONS,
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OLDEST BEE PAPER IN AMERICA
THE AMERICAN BEE JOURNAL
ESTABLISHED IN 1861

VOL. XIX. CHICAGO, ILL., APRIL 11, 1883. No. 15.

OLDEST BEE PAPER IN AMERICA
THE AMERICAN BEE JOURNAL
ESTABLISHED IN 1861

Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

Apis Dorsata, the Bee of Java.

Mr. Jacob Kefmer, of Lowel, Mich., on March 26, 1883, writes as follows :

"I send you a slip from a local paper with the following description of a new kind of bees, which I would like to learn more about, and if they would do in this country. Please answer through the BEE JOURNAL."

"In perusing a late publication on the Eastern Archipelago, we find that the writer describes as one of the curiosities of the Island of Timor, distinct species of wild bee, the *Apis dorsata*, as abounding there in great numbers. He says : "These bees construct the most remarkable and colossal honey combs, suspending them from the under side of the loftiest branches of the highest trees. In shape they are semi-circular, and their diameter is frequently 3 or 4 feet. Their wax is one of the principal exports of the island." Here is information for the American apiarists to act upon ; for an importation of the above might be found very advantageous to their industry. The Timor bee might prove to possess a longer proboscis than even the Italian, or some other quality which would make it more profitable to be kept than any of the various species we now possess."

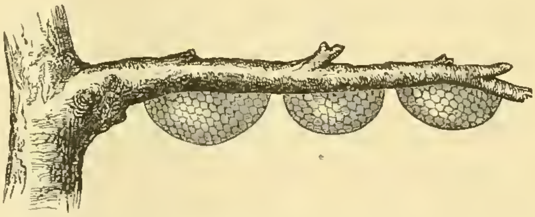
We have very often described the bees found in the Islands of Timor and Java in the East Indies, but as our correspondent, with many others who are reading the BEE JOURNAL this year for the first time are not familiar with them, we will give a very brief description.

Mr. Wallace, the celebrated traveler and author of "The Malay Archipelago," thus relates his experience in those Islands with the *Apis dorsata :*

"On examination I found them half as long again as *Apis mellifica* and their brood comb proportionably thicker. They were, in fact, a variety of the magnificent *Apis dorsata*, which is described as flourishing abundantly throughout the great Indian peninsula, from Cape Comorin to the Himalayas, as well as in Ceylon."

"In Borneo and Timor the wax forms an important article of commerce. The combs hang on the under side of horizontal limbs of lofty trees, often 100 feet from the ground. I have seen three together as above, and they are often 4 feet in diameter. The natives of Timor I have seen take them. They climb up a tree carrying a smoke torch made of a split creeper bound up in palm leaves, and hanging by a rope from their waist. They cover up their body and hair carefully, but their arms and legs are bare. The smoke directed on the comb makes the bees fly off in a cloud as the man approaches. He sweeps off the remainder with his hand and then cuts off the comb with a large knife, and lets it down to his companions below by a thin cord. He is all the time surrounded by a cloud of bees, and though the smoke no doubt partly stupefies them, he must be severely stung. While looking on from a considerable distance, a few came down and attacked me, and I did not get rid of them till I was half a mile from the place and had caught them all, one by one, in my insect net. The sting is very severe. I should imagine that in Timor the dry season answers to our winter, as the drought is very severe and much of the foliage is deciduous. Eucalypti are the most common trees, and their flowers, I suspect, supply the bees with their honey.

In Borneo combs are placed in a somewhat similar manner, perhaps formed by the same species. The only bee I have seen domesticated in the East is one at Malacca ; the natives hang up bamboos and hollow logs for it, but it is, I believe, not a true Apis, as it makes clusters of large oval shells of black wax."



Manner in which Bees in Borneo and Timor build their combs.

Mr. Frank Benton in 1880 visited the Islands of Timor and Java in search of *Apis dorsata* and *Apis Zonata* but was not rewarded by securing any to transport to America. A very interesting detailed description of his journey was published in the BEE JOURNAL for May 11, 1881. We have no idea, however, that they would prove of any value to American apiarists ; the only result would be the securing of a novelty ; their ferosity and ability to inflict terrible wounds by means of their enormous stings, is horrible to contemplate.

☞ The thoughtful and prudent apiarist will now be making arrangements to provide pasturage for his bees, if he is not already in possession of it. The time will soon be here to sow seeds of honey producing flora of all kinds, and to plant out basswood trees. Let no time be lost in making full provision for the bees, and then we shall hear no more of "blasted hopes ;" but instead of it, the songs of the apiarists and the "merry hum" of the "busy bees" will vie with each other in making glad thousands of homes, scattered all over the country. This is a "seasonable hint," and one that should be heeded at once, for this is "the accepted time."

CORRESPONDENCE

For the American Bee Journal.

Stimulating Bees in Spring.

G. M. DOOLITTLE.

I am requested to write an article for the BEE JOURNAL on "Stimulating bees, so as to get them ready for the white clover honey harvest." In my opinion there is nothing gained by commencing too early, as from six to eight weeks is sufficient time to build up a fair colony in spring, to one sufficiently strong to store honey to the best advantage. As clover usually begins to yield honey, in this locality, about June 15 or 20, the first of May is soon enough to commence to stimulate brood-rearing. Some think it does not pay to change the brood combs, by way of reversing them, putting combs of honey in the centre of the brood nest, etc., but after years of experimenting, I am satisfied it pays *me*, whether it does others or not.

Before telling how I manage, I will describe one experiment. I tried, to see if it paid to try to build the bees up in spring faster than they would naturally do it themselves; for, on this matter of *pay* rests nearly all there is of bee-keeping, to the average apiarist. One spring, several years ago, I set apart 10 colonies, all of which had plenty of honey, and were as near alike as possible, to obtain 10 colonies of bees. After seeing that all were in proper condition, 5 were left to themselves, and the other 5 worked according to the plan I shall describe. The 5 let alone were 2 weeks behind the others in swarming, and, upon footing up in the fall, I found they only gave an average of ⅔ as much honey as the other 5 which were stimulated. From this and many other experiments I have tried, I conclude it pays, and so attest my faith by adhering to that which gives me the greater profit.

About the first of May I go over the whole yard and examine each hive to see how much brood there is, and all colonies which do not have an equivalent to 2½ frames full, are shut up upon the frames of brood they do have, by means of a division-board; while those which have that amount, or more, are allowed the whole hive. At this time these last-named colonies have their brood nest reversed by putting those frames, having the least brood in them, in the centre of the cluster, and those having the most at the outside, thus causing the queen to fill these centre combs with eggs as fully, or more so, than those were which were in the centre before; while the brood in those now outside is not allowed to decrease at all. Thus quite a gain is made, with little danger of chilling any brood. In about a week I take a frame having considerable sealed honey in it, and break the sealing to the cells, by passing a knife flatwise over it; then, after spreading the frames apart, place this in the centre of the brood nest. The removal of this honey by the bees, causes them to feed the queen, and stimulates brood-rearing, equally as much (in my opinion) as any other method of feeding. If I did not have the frames of honey I would fill empty combs with sugar syrup, and use the same as frames of honey. As the honey is removed, the queen fills the cells with eggs, and at the end of another week another frame is added in the same way. The next time over, the brood is removed as at first, while, at the end of the fourth week, two frames instead of one, are placed in the centre of the brood nest, leaving one or two frames of brood between them. This brings us to near the first of June, and if one colony has brood in four frames at the time of commencing, and we use 9 frames to the hive, we have but one more frame without brood in it in the hive. The next week this is placed in the centre, and as soon as the bees get any honey, more than to feed the brood, the boxes are put on.

Those weaker colonies shut upon the frames, having but little brood, are left so till the frames are well filled with brood, when they are given a frame of honey in the centre, and then manipulated as were the others, till they are in the same condition. If I wish as many colonies as possible, I begin to take brood from those having their hive full first, and give to the strongest of these weak ones, and later, to the next strongest, till all are built up to strong colonies. I formerly gave these frames of brood to the very weakest first, but after losing several frames of brood, I learned that to give a frame of brood to a very weak colony of bees, before settled warm weather, was almost always sure to result in loss.

If I wish honey instead of increase, I work all the weaker colonies till they have 5 frames of brood each, when 4 frames of brood, bees and all, are carried to another and united with it, while the frame having the queen upon it, is placed back in the hive again. The 5 frames in the hive we wish to unite the 4 frames of bees with, are spread apart, and the 4 frames placed in each alternate space, so as to prevent any quarreling, as bees, thus mixed, seldom quarrel or harm a queen. In two weeks this united colony will be as strong as any in the yard, while the frame having the queen, can be used for a nucleus, or various other purposes. In this time of high prices of comb foundation, they could be made very profitable by setting them to building comb, for they are almost always sure to build nice straight worker comb.

In places where pollen is scarce, it might be well to feed rye meal, early in the season, but, as long as plenty of pollen remains in the comb, I do not think it pays. To feed, place in a shallow box and drop a few drops of honey on the meal, when you will put a bit of comb on a hot iron to make a smudge, to draw the bees. Use only a few drops of honey, or you may excite robbing. I would invite all those who do not think that the above will pay, who live where a crop of clover honey is to be secured, to try a few colonies, and see if they do not change their minds.

Borodino, N. Y.

For the American Bee Journal.

Comb vs. Extracted Honey.

A. W. STITH.

There seems to be quite a diversity of opinion in regard to producing comb and extracted honey. I have had some experience in producing both, and can probably say something that may be a benefit, especially to the amateur. The idea, that honey extracted before being capped by the bees, has all the good qualities of honey that is capped before extracting, does not meet my approbation. I am so thoroughly convinced that honey extracted while green, is inferior to honey capped before extracting, that I do not expect to extract any more green honey, unless in cases of emergency, when bees are gathering rapidly and have not sufficient combs to store their precious sweets; and right here let me say, that a too free use of the extractor is one reason why many bee-keepers complain of not having surplus combs. All apiarists know that bees will not build comb, to any great extent, only as instinct teaches them it will be used for storing honey, therefore, bee-keepers should not expect their bees to build comb, and at the same time keep the combs they already have empty, by the use of the extractor.

The judicious use of the extractor is more than merely to learn how fast you can sling the honey, and leave the bees to starve the following winter! While I am free to admit that the extractor is indispensable in an apiary, I do think that, all things considered, extractors kill as many bees as they help to produce.

Do not understand me to accuse an experienced bee-keeper of such blunders as to kill bees in such a manner, but as there are many persons just embarking in the business, I thought a word of caution would not be out of the way and may be appreciated.

When we examine an apiary in autumn, worked for extracted honey, where we use a two-story hive, and when we wish to supply our bees with food for their long winter nap, we find the honey in bad shape for winter, the combs in the brood-chamber often being destitute of honey, and contain much pollen, while those in the top story are sure to be full from top to bottom, or nearly empty. Such has been my experience.

I learned, several years ago, to be rather timid with the extractor, and settled down on the following plan: When white clover, which is our main dependence for surplus honey, fairly opens, I select, in the top story (for I seldom bother the brood-chamber for surplus), 5 or 6 Langstroth frames of the best worker combs, if they can be obtained; if not, a few drone combs can be used, and mark the letter W (which signifies winter) on the top bar; put those combs near together, and do not extract from them. As soon as the honey in those combs are sealed nearly half way down, I spread them apart, and insert in each alternate space an empty frame, or one partly filled with comb or foundation, and the frames thus inserted can, as fast as completed, be extracted at pleasure.

I thus secure three objects: A hive full of straight comb; the queen is forced below, on account of the frames marked containing much honey and being far apart, and the rest of the combs, as fast as completed, are filled with honey, having a nice lot of sealed clover honey for winter.

But here comes the trouble. Empty combs will not do to winter bees on, neither do I believe full frames of honey, without some empty cells, much better, in this latitude; but when we produce comb honey, the honey in the brood-chamber is in a much more desirable shape. I believe I am the only one in this part of the country that produces comb honey, and being requested, by some of my neighbors, to write my plan of manipulating sections without separators, I cheerfully make the effort.

I use the Langstroth hive exclusively, have used both 8 and 10 frames, but have no use for 10 frames beneath a rack of sections, as I use a rack similar to a crate, with partitions between the rows of sections.

The first thing, after the sections are on, is to get the bees to work in them; for Italian bees are very loath to enter boxes. The best method that I have ever practiced, is to use 10 frames in the brood-chamber until the bees are strong in number, and ready for the boxes; previously to adjusting the boxes, I remove all but 7 or 8 frames, and use a division-board on each side of the frames, so arranged as not to allow bees behind them. The hive having, heretofore, been crowded with bees to its fullest capacity, and by contracting the hive inside, the bees are compelled to take possession of the boxes immediately, or cluster outside the hive. As the bees are not desirous of swarming yet, and as the honey harvest has just commenced in earnest, they are most likely to work in the sections. Now, having the boxes on, with a starter of comb or foundation in each section (the former preferred), and after the bees have been at work in them a few days, probably they may need some attention. I usually examine each section twice a week, and this is the main secret in obtaining straight combs without separators, for we are sure to find some probably half finished, whilst others near them are just commenced. Take out all the sections that are nearest completed. and put them together, and thus always keeping the fullest together, and the ones least worked in near the lean end of the row. I think I got that "lean end" from Mr. Heddon (thanks to Mr. Heddon). If any of the sections are nearer completed on one side than on the other, put them with their fullest sides together, or near the glass at the end of the row, but leave space between the honey and end of the box, sufficient for the bees to pass, or they will empty the honey from the outside and carry it to the other sections, which is only a loss of time, and the hives are level from right to left, and if I follow the above plan, I seldom have to bend or cut a piece of comb, although if I cut a bit of comb out, it is not lost, but will make a nice starter for another section. If not quite so cheap as foundation, it is much better.

Perhaps some may think that honey produced without separators would not be nice enough for the Cincinnati Industrial Exposition. But I will say that, with my experience in the production of comb honey, and a few acres of (melilot) sweet clover, I was able to procure just such honey as Dr. Miller and others saw there last fall.

I believe my honey was all the comb honey that was there. What in the world is the matter with bee-keepers around Cincinnati? If correspondents of the various bee papers would write less about half-pound sections, yellow bees, etc., and more about practical experience in the production and sale of pure honey, and try to create a better demand at home by making better displays at their county fairs, and sell only such honey at home or abroad as they can fully warrant, we would certainly do the greatest good to the greatest number.

Dividing Ridge, Ky., Feb. 23, 1883.

For the American Bee Journal.

Description of My Bee Room.

U. E. DODGE.

I have 42 colonies in the cellar, and 19 packed on the summer stands. Those on the summer stands had a flight on Feb. 17, the first since Nov. 15. The thermometer showed 65° in open air, 48° at the top, and 45° at the bottom, in the cellar. No signs of dysentery in the cellar or on the summer stands. The lowest range of mercury, this winter, was 9° below zero. Last season was poor, in this locality; no surplus, and very little natural increase. This is my first year's experience in cellar wintering. My arrangements were as follows: I have a room, 10x12 feet, partitioned off in one corner of the main cellar, which is thoroughly plastered, on two sides and bottom, with hydraulic cement; the other two side walls are made of matched boards and battened. I have a tight-fitting door from the main cellar, and in close proximity to my outside cellar-way, through which I enter the cellar below, down five stone steps to the cellar bottom. From the bee room, I have a 3-inch glazed tile pipe, running through the cellar wall, 3 feet under ground, running horizontal about 8 feet; on the end of this pipe, I have an elbow which turns the pipe up, at right angles with the pipe, that runs through the wall, from the cellar, leaving the end of the elbow sticking out of the ground about 6 or 8 inches. I have a wooden tube, 6 inches square and 8 feet long, made of matched pine boards and painted, with galvanized iron, one-half circle, on top, to keep out the storm and give room for free circulation of air, with a damper to shut off the outside air, when desirable. This wooden tube I place over the end of tube-pipe, in a perpendicular position, holding it in place by hooks and staples, attached to the outside covering of the cellar door, and earthed up snugly around the bottom or base of the tube; the damper completely controls, and I find I can add or diminish the volume of outside atmosphere at pleasure, which gives complete control of the temperature of the bee-room, at any time, when the weather outside is colder than the ordinary temperature of the cellar. To control the inside atmosphere of bee-room, I have a 2½ inch tin pipe, connected with the room, on the opposite side from the tile pipe, and running through the floor of the sitting room, which is directly over the bees, connecting with the stove pipe above, in that room. In the pipe is a tight-fitting damper, which I can use at will, checking or increasing the draft of air from the room through the chimney.

I have two thermometers in bee cellar, one hung near the bottom and one near the top. It has not, this winter, been lower than 42°, nor higher than 49°, since Nov. 15, the day I put the bees in the cellar. In the sitting room and directly over the bees, stands an anthracite coal fire, constantly burning, night and day.

To further control the temperature of the bee-room, as the weather becomes warmer and spring advances, should the bees show signs of uneasiness, I have secured a quantity of ice and propose to remove the upright wooden tube which fits over the end of tile pipe, leaving the end of tile sticking above ground, about 6 or 8 inches. Over this I propose to set a box with a hole in the bottom, just fitting over the tile, leaving the end of the tile tube sticking up inside of the box; this box is supplied with a tight-fitting lid, that may be opened or shut, at pleasure. In this box I intend to put ice from day to day, as required, in sufficient quantities to cool the air that passes through the tile pipe into the bee-room, to obtain the desired temperature from day to day, until I deem it proper time to set my bees upon their summer stands, say about the blooming of soft maple.

There does not seem to be the slightest moisture in the bee-room; the quilts seem as dry as the same material would be in an ordinary room. The bees seem perfectly at home, and, to all appearance, in a happy and contented mood. How long they may so continue, is a problem that I am unable to solve at present; but the prospect is certainly flattering, and I hope reflections from "the silver lining," may penetrate and cheer the hope of every genuine apiarist of the land.

If the theory and practice of damp cellar wintering is correct, I am certainly on the wrong track, and in the opposite extreme. My cellar is so dry that I can hardly brush the floor without raising quite a dust. There has not been three days in succession, this winter, that I have not seen my bees in the cellar, making my observations quite short, but, most invariably, turning back the quilt of one or more colonies, which does not seem to disturb them in the least.

My experience in out-door wintering, in the past, has led me to believe that one important factor in successful wintering, is to keep the bees dry, and I fail to comprehend why removing to a cellar should so much change the nature and constitution of the bees, that it should require an entirely opposite state of things. To admit, when convinced, is one of the most noble traits of character, and should I find, by more extended experience, that I am pursuing the wrong theory, to the injury of the bee-keeping fraternity, then I shall acknowledge the error.

My ice proposition is merely theoretical, and should I be on the wrong track, and in danger of injuring my bees, will some one notify me through the Bee Journal before it is too late, and the injury is done. Also state the extreme limit that it will do to keep bees in the cellar, when put in Nov. 15. I wish to keep mine in as long as possible, and not overdo it. I have a quantity of candy, ready for putting on my hives, if necessary. Can I put it on in the cellar, should any need feeding?

Fredonia, N. Y.

[If the bees remain quiet, when the maples, willows, etc., furnish pollen, will be time enough to put them out on the summer stands. You can put candy over the frames, at any time it may be necessary, and they will readily take it.—Ed.]

* * *

For the American Bee Journal.

The Half-Pound Sections.

JAMES HEDDON.

It seems to me that some of our fraternity are losing faith in the practical good sense of bee-keepers.

One says, if we adopt the half-pound section, it will ruin the business. Well, then, my faith in our folks is thus great that I really think they will not adopt them, or do anything else, that will "ruin" ourselves. If half-pound sections have connected with them, and their use, an expense which costs more than the consumers' increase of demand is worth, then those who tempt the little Tarantulas, will be the first ones to be bitten.

Mr. Baker speaks as though it were inconsistent for me to have first cautioned against their use, and then assert that I was going to use a few thousand of them. I made up my mind to this: if there is a demand for this size, no individual or organized efforts can stop a catering to that demand. I put in a word of caution, hoping to induce others to touch them lightly, and in a less expensive way, than last New Year's boom might lead many to do; that boom is now over. A corresponding reaction has taken place, and I think it expedient that some, who are the best situated so to do, and whose experiments are sought after from time to time, should experiment with and settle the question, here in the West, by the argument of experiment between the producer and consumer.

I have carefully read all the articles I have seen on the subject (I take nearly all the bee papers), and, as yet, I have gotten little light regarding the wisdom of producing comb honey in half-pound packages. I fancy I discover an under current of a fear of competition, in many articles. This argues in *favor* of the adoption of the half-pound section. When I changed from two to one-pound sections, I was told by many writers that I need not expect as many pounds of honey. I have taken no less with one than with two-pound sections, when using them side by side. I think I know the reasons why. These reasons give me full assurance that I will realize just as many pounds with the use of half-pound sections as with any larger size. My bill for sections will be doubled, and the labor of manipulation will be increased. Between this and the extra price, and sure, safe transportation of the small sections, I shall be left to decide.

Does it not seem strange that bees cannot work readily in a space 4¼x2 13-16x12, in the half-pound sections when they "do not object" to a space 4¼x4¼x2, with tin side walls at that? Have they an idiosyncracy against the sound of "half-pound?" I first said, and say now, "go slow." Do not go to any undue expense to rush into the new, till you have more reason to think it enough better than the old, to pay for so doing. I shall not adopt the small sections to the displacement of my one-pounds. I can mix them with one-pounds in my experimental supers, and in my shipping crates, and use or refuse them without any alteration or fixtures, and I mean to be able to truthfully talk more positively upon this subject ere another year rolls around.

Please let me say to Mr. Newman, of Ohio, that I will "unload" regarding our winter diseases of bees as soon as my last chance for 1882 and 1883 experimenting is over.

Perhaps a short item will do for the subject of "Light in bee repositories," referred to on page 140, by yourself and Mr. A. P. Fletcher. Please tell your mechanical acquaintance that death is as natural as life. That nature, with her infinite arms, embraces all that can be imagined by the mind. Nature is at war with itself. Most things thrive at the expense of other's premature death, and man is found in either class, viz.: the consumer and consumed. Animal and vegetable beings thrive better, when assisted in the struggle, by the wisdom of man; whatever bees "naturally" do, may or may not be the very best or worst thing they can do for the perpetuation of their existence. Evolution is the only key that can unlock the many mysteries just coming into view. It is the great truth that underlies all other truths, and is now dawning upon the common mind throughout the world. It has been demonstrated that bees can, in cellars as in "trees in the woods," winter well with light enough to tell potatoes from apples, but it has also been found out that an advantage is gained by changing this "natural" condition of affairs, and keeping them free from all irritating influences; among which is light, as well as the activity forced upon them from the extreme low temperatures of our winters. None of these are, however, the real cause of dysentery.

Dowagiac, Mich., March 30, 1883.

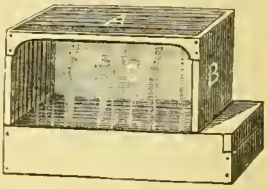
* * *

For the American Bee Journal.

My Observation Hive.

W. HARMER.

I use the Heddon hive, as will be seen by the engraving. As an observation hive, it can have any number of Langstroth frames, from one to seven; the sides are movable, and can be taken out, as they slide down in grooves, and glass can be put in the grooves instead of the wooden sides, making an observation hive. It is a very simple hive to make, and I think every bee-keeper should have an observation hive. I would not be without mine for considerable. It is an endless source of pleasure to me.



Heddon's Observation Hive.

Manistee, Mich.

* * *

Western Maine Convention.

The bee-keepers in Southwestern Maine met at the residence of Mr. J. B. Mason, Mechanic Falls, Maine, on Wednesday, Feb. 28, 1883, at 1 o'clock p. m., for the purpose of forming an Association.

The meeting was called to order at the appointed time, and W. W. Dunham, of North Paris, was chosen temporary chairman; after which, communications were read from Messrs. Wm. Hoyt, of Ripley, secretary, and F. O. Addition, of Dexter, president of the State Bee-Keepers' Association; also from Mr. H. B. Cony, of Augusta. Following these, Mr. J. B. Mason, of Mechanic Falls, presented a paper, and it was voted to have it published in the *Apiarian*. These communications were read carefully and considered by all present.

A permanent organization of the Western Maine Bee-Keepers' Association was made, and the following officers were elected for the ensuing year: President, Dr. J. A. Morton, Bethel; Vice-President, J. B. Mason, Mechanic Falls; Secretary, W. W.

Merrill, Mechanic Falls; Treasurer, W. W. Dunham, North Paris. Committee on Constitution and By-Laws, W. W. Dunham, J. A. Morton and J. B. Mason.

A constitution and by-laws were adopted. The first article of the constitution defines its name as the Western Maine Bee-Keepers' Association.

An article in the by-law provides, that any person can become a member by signing the constitution, and paying the sum of 25 cents; ladies, simply by signing the constitution.

The Association starts out with 20 members, 18 males and 2 females, representing 145 colonies of bees. The object of forming this Association was to advance bee-culture in this western part of Maine, and in no wise to injure the State Association, and we would like all to join this, as well as the State Association.

A vote of thanks was tendered to Mr. Mason and family, for the kindness bestowed by them.

The next meeting will be held on Wednesday, April 25, 1883, at the residence of W. W. Dunham, North Paris, Maine, at 1 and 7 p. m.

W. W. MERRILL, *Sec.*

For the American Bee Journal.

Narrow vs. Wide Frames for Sections.

J. G. STEER.

On page 144 of the BEE JOURNAL, for March 14, T. E. Turner writes concerning wide frames for holding sections; in which he gives some very plausible objections to their use, as I have fully learned from experience. The principle one, namely, the difficulty in removing the sections from wide frames, I have been trying to overcome. and as a result have made a narrow frame both to hold sections and to answer the place of a division-board, in winter, for chaff. I do not know that I can make the description of it plain to the readers of the BEE JOURNAL, but I will try.

The frame I use is the Gallup, to hold 4 sections, 5¼x5¼; inside measure, 10⅝x10⅝; outside, 11¼x11¼. Instead of the wide frame, I make a frame to fill the whole space of the inside of the hive, viz.: 12 inches, and only ½ inch wide. I cut the side bars out of ½ inch stuff, and 11-16 thick, and reaching clear to the bottom of the hive. The bottom bar is the same, and 12 inches long; to be nailed to the side of the side bars even with the bottom ends of the same, instead of to the end. I use an ordinary top bar of the frame. for the top, letting it project over ½ inch, on one side, and the other being even. On the side which projects over, I nail the bottom bar, which will also project ½ inch, and is to hold and support the sections.

Previous to nailing, I slot the inside of side bars, the whole length, with a ⅛ inch slot, 3-16 deep, and ⅛ inch from the edge. Be careful in nailing to make these slots come nearest to the edge of the side of the frame that is even. The slots are for ⅛ inch wood separators. These can be slipped in at bottom of the frame after it is nailed, as will be seen, the bottom bar being on the other side, it will not interfere with their insertion. The separators will stay just where you put them.

Now you have a frame, with bottom bar reaching nearly half-way, or ¾ inch across the bottom of the section, which, with ¼ inch at the sides, and ¾ at the top, is sufficient to keep the sections in their places, and allow of their removal with ease. Set the frame, filled with sections, in the end of the hive, with the naked edge of the sections next to and close against the end of the hive; then the separators will come next to the brood. If desired to put two cases or frames of sections at the side of the brood, the second set of sections will slip up against the separators, and into the frame of the first set, as will be seen, ⅛ of inch.

The advantages of this frame are: It allows of easy manipulation, as it fits neatly in the hive; it will stay in its place, and prevents the bees from getting at the outside of the sections to stick them over with propolis.

It serves as the very best kind of a division-board for chaff packing, as the thin separators and bee spaces admit of a more ready absorption of moisture. They can be used in the upper story in the same manner as two at the side.

I would say to Mr. Turner I always make my upper story to admit division-board, after being filled with frames of sections, which, when removed, allows of free access to the frames of sections.

If I have succeeded in making the principle plain, any one can adopt it to their different size of hives. Some may prefer a wider bottom bar, to support the sections. Such can use ⅝ or ¾ inch lumber, which will still allow enough of section to project for a "finger hold." I prefer about ⅝. If there is any merit in the thing, all may freely use it.

Barnesville, O., March 20, 1883.

For the American Bee Journal.

Queen Rearing—The Lamp Nursery.

W. Z. HUTCHINSON.

Queens having now become quite a staple product of the apiary, perhaps two or three articles devoted to the subject may not be amiss; although, as Mr. Doolittle said in regard to the excellent articles that he gave us last year upon comb honey; "what I write will necessarily be somewhat of a repetition of what I have already written."

The first step for the would-be queen breeder is to Italianize not only his own bees, but all the bees within, at least, three miles of his own apiary. The demand, at present. for pure Italian queens. that are purely mated, is such that a queen breeder cannot allow black bees in his neighborhood. In regard to the strains of Italians that he will breed from. each one must decide for himself. I prefer the dark Italians. I do not wish to say that there are no good honey gatherers among the light Italians, but, among the several different strains of light-colored Italians that it has been my fortune to try, none have equalled any of several different strains of dark Italians that I have owned. Honey production, hardiness, amiability, and color should be bred for, in the order named, but I fear that some breeders have bred in the reverse order. I say nothing about the Cyprian and Syrian bees, because, from experience, I know nothing of them.

For breeding stock from which to rear queens, no pains nor expense should be spared to obtain the best; and, as probably the majority of the queens will mate at the home yard, equally as much care should be taken in obtaining stock for the protection of drones. Selection of stock for the protection of drones is a point that, I think, has been too much neglected. After the apiarist has furnished his own apiary, and that of his neighbors, with choice stock, he is ready to commence the rearing of queens for others.

Although objections have been raised against the hatching of queens in a lamp nursery, yet the majority of breeders hatch their queens in this manner; in fact, it would be well-nigh impossible to rear queens at the present popular prices without the aid of the nursery. During the past five years I have had queens hatched both in the hives and in the nursery, and I have never been able to discover that hatching a queen in a lamp nursery enfeebled her constitution or anything of the kind. I can detect no difference between queens hatched in a nursery and those hatched among the bees. A lamp nursery need not be a complicated affair—just simply a box with double walls of tin, and large enough to allow several frames to hang inside. A hole should be made at one of the upper corners to allow the space between the walls, which should be about ¾ of an inch, to be filled with water. A round hole, perhaps an inch in diameter, should be made through the walls of the bottom, at the centre, and also through the side walls of each side, and a tube of tin soldered in each hole, thus fastening the walls together so that they will not bulge when filled with water. The tin tubes can be covered with pieces of tin, so that the queens cannot crawl out and become lost. The nursery should be fastened in the top of a tall box, the top of the nursery being level with the top of the box. In order that the heat from the lamp below may circulate all around it, there should be a space of an inch between the sides of the nursery and the inside of the box. Strips of wood, an inch square, can be crowded in between the upper edge of the box and the nursery, and the nursery furnished with a wooden cover hinged to one side of the box. To obtain the best effect, the box, in which the nursery is placed, should be of such a height that the bottom of the nursery is about a foot above the top of the lamp chimney. A thermometer should be kept in the nursery, and the temperature kept between 90° and 100°. If the box is too tight or close, the lamp will not burn well. To save oil, and to protect the nursery from sudden changes of temperature, it is better to keep it in some building. If it can be placed in some room that can be darkened, and the light admitted through a small aperture, it will greatly facilitate the examination of queen cells about to hatch; as, by holding them up before the aperture, even embryo queens can sometimes be seen, especially when the cells are constructed of new wax. When there are many cells in a nursery, it requires close attention, otherwise a newly-hatched queen will destroy several cells. I have a brood frame, similar to those used for holding sections, divided into apartments about 2 inches square. This brood frame is covered with a sheet of glass on one side, and upon the opposite side, each apartment is furnished with a glass door that is hinged fast by pasting on a strip of cloth for a hinge. Each door is kept closed by a little latch made by driving a common pin part way in, and then bending it over, so that it can be turned around over the door, or turned away when I wish to open it. This brood frame of apartments is kept hanging in the nursery, and about 9 o'clock in the evening, I examine each cell by holding it up before the lamp, and when I find a cell, the occupant of which appears nearly ready to commence biting her way out, I place it in an apartment by itself.

Some breeders have only one nucleus in a full sized hive, while others make a small hive for each nucleus, and use it for no other purpose, but, to my mind, it is better to use full sized hives, putting two nuclei in each hive, and keeping them separate by using division-boards. These division-boards can be made very cheaply by using ⅜ lumber, tacking a strip of wood across each end to prevent their warping, and then tacking a strip of enameled cloth over the edges, not drawing it up tight or close against the edges of the boards, but allowing it to point out so that it will form a sort of tube all around the edges of the boards, and this yielding tube will fit any inequalities there may be in the sides of the hive.

For a stand for the hives I use a board a little larger than the bottom of a hive, with two cleats nailed underneath each end to prevent it from warping and to raise it from the ground. To furnish each nucleus with an entrance, I turn the hives around upon its stand until two diagonally opposite corners project beyond the edge of the stand or bottom board sufficiently to allow the bees to pass under the edge of the hive. Three-eighths of an inch below each entrance, to the edge of the bottom board, I nail a small piece of board, 3 or 4 inches square, to furnish the bees with an alighting board. Queen registering cards are a necessity, as they show, by the position of the pins upon their dials, the date of the last examination, and the condition of the nucleus at that date—something that the memory could not do.

Queen rearing nuclei need to be examined quite often, and when the hives are placed upon the ground, so much stooping becomes tiresome; for this reason I have a large share of my nucleus hives perched upon stakes, at such a height that they are convenient for manipulation while I am standing upon my feet. I also have the covers hinged, so that they can be turned back, thus forming convenient shelves for the smoker, queen cages, box of comb containing larvæ, etc., etc. There are also two sticks tacked to the sides of each hive, and these sticks project a few inches beyond the end of the hive; and upon these projecting ends I can hang combs while caging queens.

Rogersville, Mich.

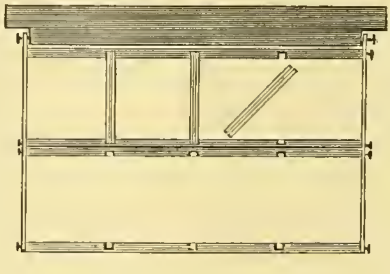
* * *

For the American Bee Journal.

New Device for Sections.

THOMAS CANNY.

I send you a drawing of a section that I shall use this season. This kind of section originated with me, I believe, as I have never read or heard of such being in use. It is cheapness, utility and convenience combined, in obtaining surplus honey in one-pound or half-pound sections, doing away with extra cases, racks, brood frames, etc. The apiarist can obtain his surplus honey in either half-pound or one-pound sections, and the honey stored in both at the same time, by this device. If you want to get pounds, cut only one kerf on both top and lower bar, of either top or lower tier of sections.



With a nailing apparatus it can be put together as quickly as 3 one-pound sections. Please put it in the Bee Journal for the benefit of all beekeepers. It is not patented.

East Poultney, Vt.

* * *

For the American Bee Journal.

Inspectors of Apiaries.

J. E. PLEASANTS.

Dear Editor:—Inclosed find a bill introduced in our State legislature at its last session, and which has become a law. What is your opinion of such a law? I favor it. The rainfall up to date is 6½ inches.

Carbondale, Cal., March 24, 1883.

A bill has been introduced in the Assembly, by Mr. Reeves of San Bernardino, to authorize the Boards of Supervisors of the several counties of this State to appoint inspectors of apiaries, and provide for their compensation, and defining their duties, and for the further protection of bee-culture. The bill has the concurrence of the representatives from San Diego county. It provides as follows:

Section 1.—The Board of Supervisors of any county wherein bees are kept, are hereby authorized to appoint one or more persons as inspectors of apiaries, to hold office during the pleasure of said Board.

Sec. 2.—The Board of Supervisors shall fix and determine the compensation of the inspectors of apiaries to be paid out of the funds of the county, not otherwise appropriated.

Sec. 3.—Upon complaint being made to the inspector, to the effect that, in complainant's opinion, the disease known as "foul brood" exists in any apiary in that county, it shall be the duty of such inspector to inspect such apiary as soon as practicable, and direct the person in charge thereof to destroy all hives ascertained to be so affected, together with the combs and bees therein, by burning or burying the same in the ground the following night.

Sec. 4.—If the owner or person in charge of an apiary, by his own inspection or through any other source, discovers foul brood in any hive in said apiary, it shall be his duty to destroy such hive and contents in the manner provided in section 3 of this Act.

Sec. 5.—Any persons failing to comply with the provisions of the last section shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not less than 5 dollars nor more than 25 dollars for the first offense, and by a fine of not more than 50 dollars for each such subsequent offense.

Sec. 5.—This Act shall take effect from and after its passage.

[We think such inspectors will be beneficial, if they attend to their duties.—Ed.]

* * *

For the American Bee Journal.

Getting Candied Honey Out of Combs.

W. H. B.

I have been experimenting, for several years, to find out the best way to get candied honey out of the frames. In fact, I have experimented away many dollars, for I wanted to get it out in a hurry, and I have made several things for the purpose, which it is useless to describe, and wasted more than a few combs. About one year ago I thought I would try once more, and I was successful. I had a boiler made ½ inch longer than my longest frame, ½ inch wider than my shortest frame, and 5 or 6 inches deeper than the deepest frame. This will just let the longest frame in, lengthwise, and the shortest frame in crosswise. If you have an intermediate frame, you can lay a stick across the boiler; inside the boiler put a piece of tin, doubled in the shape of an eaves-trough, and solder the edges to the boiler, just low enough to let the frames down below the top of the boiler. Then place the boiler on the stove and put in about 2 inches of water; make a hot fire and commence to uncap the honey; as fast as uncapped, set the frames into the boiler. When it is full, the first frames will be ready for extracting. If the honey should be very cold or frozen, or the honey is very hard, it may need to be set into the boiler the second time. With this boiler I can extract nearly as fast as when the honey is liquid. I use the boiler to carry the frames in; in the summer, to store frames in; also, in case of emergency, it comes handy to store unripe honey in. The boiler should be made of galvanized iron, so that it will be strong to handle.

Gazenovia, N. Y., March 31, 1883.

For the American Bee Journal.

How to Introduce Queens.

A. R. KOHNKE.

Onion! Asafetida!! Whew! Next comes stale eggs. I wonder that the bees did not leave their master and go to the woods where they had, at least, pure air, if nothing else. When I read the above suggestions in the JOURNAL, I intended to give the remedy I have used for several years, with perfect success, but other business preventing until I got the latest batch of German papers, in one of which (*Deutsher Bienenfreund*), is described a method by a German bee-keeper, Mr. Scheuerle, identical to my own, of which I give a condensed translation:

"After having lost and sacrificed many a nice and valuable queen, in order to discover a safe method of introducing them, I have, at last, hit upon a plan which has proven entirely successful. In order that a colony may accept a strange queen, five conditions must be fulfilled: 1. The colony must be queenless, nor should there be any queen-cells with brood or even eggs in them. 2. The new queen and the queenless colony must have the same scent. 3. The colony must be confused or bewildered. 4. All bees must be present at the operation. 5. The colony, with the introduced queen, must be kept in a dark place, say 24 hours.

"Some may think that the fulfillment of these conditions are very troublesome, which, in fact, is not the case. In order that you may not be detained, get everything you may need ready before hand. You will need the following: 1. Essence or extract of balm (*Melissa officinalis*), a small quantity to be had at the druggists. 2. A piece of woolen cloth, the size of a hand, and a small piece of cotton cloth, as also a strong quilt. 3. A tumbler. 4. A small piece of comb honey, but having no running honey about it. 5. A room with one window, which may be darkened.

"If you get the queen sent from a distance, she and the accompanying bees should be liberated in a warm room, to void themselves; if the room is not warm enough, it must be made so.

"Now, suppose the shipper of the queen has sent you a notice of having mailed or shipped by express the queen you have intended to give to a certain colony, you will know about what day to expect her arrival. The evening before, when all the bees are home, take that colony into the room spoken of above, and see that no bee belonging to the colony leaves or flies off. Having received your queen and given her and the accompanying bees a flight, in another room, always keeping an eye on her, catch her again and put her with some of her companions under a tumbler, then take a piece of cotton cloth, put some of the extract of balm on it, and wipe the inside of a tumbler with it. Now take the bit of honey comb; put the queen and some few of her bees with her under the wiped tumbler, and let them remain there for sometime, or rather until you are ready to introduce her. If the colony, which is to receive the new queen, has an old one, that one should be taken away about noon, on the same day you wish to introduce another; but as soon as you get the colony into the room, moisten the piece of woolen cloth with essence of balm, and push it into the entrance of the hive, which is kept in the darkened room. If you get the new queen early in the morning, and, without delay, exposed her to the essence of balm, she will have acquired the scent by evening, otherwise she must remain under the tumbler till the next day.

"In order to better find the old queen, and also to confuse the bees, transfer the bees, comb and all, to another hive, looking carefully over each comb, as you remove it from the old hive, until you have found the old queen, which must be caught and caged, and then finish transferring the bees to another hive; the bees remaining in the old hive must be brushed out before the entrance of their new hive, and when they are seen to move in, the new queen is also put before the entrance, and will go in with the rest. Having done this with open shutters, and as near the window as possible, darken the room as soon as you see the queen enter the hive, to cause all the bees flying about the window to join the colony and let them stay there 24 hours, after which you may put them on their stand in the apiary.

"To re-queen queenless colonies, the apiarist must take such precaution as will suggest themselves, viz.: There should not be left any queen-cells in the hive, nor should there be a laying worker, which might cause trouble.

"The main principle is that the colony and new queen have the same scent, hence the perfume must be taken from one, and the same bottle for both. And to have something agreeable to the bees, is certainly preferable; hence, the odor of balm is better adopted to this purpose than anything else, for balm and a queen-bee have both the same name in the Greek language, viz.: *Melissa;* and this, perhaps, on account of both having the same odor."

REMARKS BY TRANSLATOR:—Three years ago last summer, while making new colonies by dividing, I got two queens into one hive, getting an old queen by accident, or rather oversight, into a nucleus which I strengthened with some frames of brood and bees, spraying them with water of balm, as also the bees and laying young queen introduced into the nucleus. Both were laying the next day, when I discovered my old colony acting queenless.

Youngstown, O.

For the American Bee Journal.

Eucalyptus for Honey in Australia.

A. VERGE.

In a late number of the BEE JOURNAL, a bee-keeper, somewhere in California, reported a quantity of his honey crop to be derived from eucalyptus. It was a pleasant surprise to me to hear that one of our Australian trees had been recognized as valuable in that respect, in a country producing so many plants and trees of world-wide reputation; and though I do not suppose it will anywhere be found to yield such returns as are reported to be derivable from basswood, yet all its varieties will be found to be good honey producers, and valuable beside on account of the durability of their wood, which is especially well suited for the purpose of fencing, wharf piles, railway sleepers, etc., etc.

They will not, I think, flower much before the tenth year, but considering how very serviceable such wood will be, there is no tree, in my opinion, more deserving of being extensively cultivated, especially out in the prairie regions.

For both purposes, probably the best varieties are ironbark (E. paniculata); red or large leafed ironbark (E. siderophloia); or silver-leafed ironbark (E. melanophloia); bloodwood (E. corymbosa); stringy-bark (E. obliqua); blackbutt (E. popularis); and a species hereabouts called box, but the title of which I am ignorant of. It is the most, in fact the only, ornamental one of all, and is a fine shade tree, being frequently planted around Sydney in ornamental grounds; its timber, however, is not durable, being liable to dry rot. Blackbutt, again, does not grow beyond a few miles from the sea coast.

The honey secreted in the flowers of these trees has a fine flavor, though it is strong. There are still other varieties of the tribe indigenous to western Australia and south Australia, but I know nothing of their qualities. Here in latitude 31° south, they do not all bloom at or near the same time of year; ironbark and tallow-wood (another variety) begin in October, while bloodwood blooms from January to March, and near the sea coast where the frost is less severe, the country there being more thickly timbered, and consequently warmer. They begin a month earlier, and continue nearly a month later in flower.

I am but a novice in the use of the bar-frame hive, and, of course, I meet with frequent difficulties. I began only, last year, with 12 colonies of bees in Langstroth hives, procured of A. H. Newman, Chicago, at the suggestion of Mr. MacDonnell, of Sydney, to whom I am indebted for much valuable information on the mystery of the system. I had not used comb foundation long before I discovered that the adhesion caused by pressing the alternate strips cut in the edge of the sheet against the side of the triangular upper bar, after both strips and bar had been heated, was not sufficient to enable the sheet to support the mass of bees; as the bees invariably build out the middle and lower parts first, which were then filled with honey or brood before the top had been worked. I now fasten with hot wax, and have no further trouble.

1. Why do not the bees work out the sheet of foundation to the lower bar and attach it thereto? Is it because the frames hang too low; some of them leaving barely ¼ of an inch?

2. Why do they destroy the newly hatched brood? A great many were destroyed last month, though there was an abundance of clover and other honey plants in bloom; so many, in fact, that the ground below each box was quite covered with dead ones, and the smell of the decaying bodies might be felt at a distance. All the young bees that I saw being worried, were healthy looking and well formed; the destruction seeming to be common in those hives with wired foundation, and from which I had been taking cards of brood and cutting queen-cells in order to stop swarming. Two small colonies, which had received cards of brood, did likewise, although they had no queen-cells. Had it not been so in the latter case, I should have supposed that the slaughter was owing to my check on their attempts to swarm. Two other swarms, which have built out their own comb in empty frames, and which have not had their frames transposed, have not destroyed any.

3. What should I do towards the close of the honey yield with a hive having ten frames, chiefly of brood, and on which I have section boxes. If I remove the sections altogether, there will be little else than brood in the brood-chamber, and consequently no store for the hatching bees.

Quinby, at page 173, on boxing, says that "six combs are all that a hive requires when boxed;" but I have ten frames with eggs and brood in all. Ought I to remove some frames and confine to six only, as recommended, and then supply combs or foundation to the brood-chamber to be filled for their own use as the sections are removed. We have only frost here in winter, but flowers are quite scarce. My boxes are placed 10 inches apart, on a frame covered by a flat roof 6 feet wide; the frame is 15 inches from the ground, and rests on supports protected by pots of mixed tar and grease, without which, in this land of vermin, the black ants alone would kill every colony. They have sunshine before 9 a.m. and after 3 p.m.

From previous experience with bees in common boxes, I am quite certain that we shall get very satisfactory returns under the new order of things, in this locality; and I am, therefore, desirous of preparing to extend operations, and dealing with the industry as a business, though I have other means of dependence. In this view of the case, an assistant, at least, would be an absolute necessity; but the difficulty of meeting with any one possessing the requisite knowledge—no such person being obtainable in this country—is insurmountable.

Though I had always, hitherto, doubted it, I have now become satisfied that maize, too, must be included among the honey producing plants; by the direction of my bees flight, I know that a large proportion of the stores, now rapidly coming in, must be derived from it; besides I have watched them on its tassels when they were certainly searching for honey and not collecting pollen.

Mr. Editor, I send you some seeds of Australian trees; they are: 1. Blackwattle (acacia decurrens), the bark of which is valuable for tanning purposes. 2. Wattle (acacia). 3. Wattle (acacia). 4. Ornamental evergreen shade tree, a variety a pittosporum, a honey producer. 5. Eucalyptus, or *box* referred to before. 6. Australian forest oak; the wood of which was once extensively used for shingles. All of them will grow readily on the bare, hard ground, or on an ash bed that has been moistened and made solid by rain, provided they be dropped on top and pressed close; the soil being well shaded till they take firm hold, and kept moist when the air is dry. They will grow (except probably No. 4) on any poor clay or stone land; in fact, they are the hardiest trees known to us here; and will certainly not meet with more severe conditions of existence in America than in this country. I am not aware, though what extent of cold they can endure.

East Kempsey, New South Wales.

[Having no place suitable for testing the seeds sent us by Mr. Verge, we have sent them to Mr. Heddon, who will, doubtless, plant them and report the results in due time. He also answers the questions thus:—Ed.]

As I sit here at my desk, on April 6, and the mercury nearly at the freezing point outside, my imagination carries me to the home of Mr. Verge, all sunshine and flowers, surrounded by the numerous blessings and evils that his more torrid climate affords, and I feel stealing over me a fear of incompetency to answer his queries as I wish I could; but from what I have learned by my experience here, I will say:

1. The bees partially recognize the bottom bars of the frames as bed-rock, and thus propose to pass over them when passing under their combs, and thus leave the space referred to instead of recognizing the space below the bottom bars as a proper passageway. There should be ½ inch space below your bottom bars, and we always make ⅝ in our new hives, as ⅛ is allowed for shrinkage.

2. There are a number of reasons why bees often drag out their pupa. If the surplus receptacles are not as they should be, they often do it to make room to store below, during an excessive flow of nectar. Again, you may have so placed the frames of brood you manipulated as to force the bees to cut a passageway between them, and thus destroy the pupa. I have used wired comb foundation for all the combs I have had built, for three or four years, and can assure you the wires do not in any way interfere with the success of the coming generation of bees. I have had (by careless handling) the wires rust and stain the foundation for inches each way, but all went as rapidly and successfully as before.

3. You should, in such cases as you mention, feed your bees with the cheapest wholesome food you can obtain. Cane sugar syrup is excellent. The dearth of the brood-chamber is more than made up by the increased amount of comb honey in the sections. The feeding is a very simple, safe, and practical procedure, when you once understand it, and are properly equipped. I would not encumber my system of management with any such removal of brood, and giving of frames of foundation. I not think it at all necessary.

The unsupplied and unsuppliable want of efficient help, you mention, is much realized in this country; also since honey production has reached its present proportions. My practical working school for apicultural student-apprentices, was inaugurated for the purpose of aiding in supplying that want, which, it is hoped, will be of mutual benefit all around. Of course, most of those who thoroughly and practically learn the business, will embark in it on their own capital; but some there are who must walk before they run, and some love travel and scenery in foreign lands, and by a year or two more we can send you a man who will not only "assist" you, but be of much service in bringing the latest practical "kinks" from the land of "Yankee invention." One who can manage your capital at a profit while you can do as you please.

I will do the best I can with the seeds. Many thanks to you and the editor.—James Heddon.]

SELECTIONS FROM OUR LETTER BOX

Honey Vinegar and Cider.

In the Bee Journal, page 143, Mr. W. Z. Hutchinson gives us Mr. Bingham's plan for making honey vinegar, which he says was good. We made some last fall from the washings of vessels. after extracting. The honey was first-class, smartweed honey, but the vinegar had a sickening taste about it, and the only way we could use it was to mix it with sorghum vinegar, the kind we were using. Does honey vinegar usually have such a taste? Joseph Beath.

Corning, Iowa.

[The honey vinegar we have made has not only been vinegar of the best kind, but it has also, while becoming vinegar, always been a palatable substitute for cider, and not distinguishable from it. It usually requires a year to mature so as to be a "tip top" article, and if very sweet, more time will be required, and better vinegar obtained. Mr. Beath may not have made his sufficiently sweet.—T. F. Bingham.]

My Valentine.

The past season was too wet for obtaining much honey. My bees did moderately well. I commenced the last season with 7 colonies, spring count, and increased to 13, and all are doing well, except 2 very late swarms, which are weak. I winter them on the summer stands. All but 1 are in box hives; that one hive is my own make, and the bees in it are doing better than any of the others, and I intend to transfer all the others, in the spring, into Langstroth hives, and would you use the old comb or foundation? What is the best time and plan of doing it? I send you a sample of my bees; are they the German or black bees, or are they hybrids? They show the yellow bands pretty plainly. My valentine was a swarm of bees. My wife being sick, leaving me to do all the house work as well as out-door work, confining me closely to the house, causing me to notice my bees more particularly. Two late swarms were weak, and I fed them syrup made from coffee A sugar, and yesterday, being very warm, I discovered a swarm of bees about 75 yards away, coming toward the house; they passed over it a little distance, and whirling round and round, came down, and tried to enter four or five hives; finally entered one having a weak colony. I have been feeding them since, and they seem very quiet and well satisfied. Where did they come from? And why did they come in such a manner? I never saw such a winter as this, with incessant floods; even the little creeks overflowed their banks, and the Ohio river was never known so high; it was almost from hill to hill, sweeping corn and hay stacks off by wholesale; making almost a clean sweep. Now, the weather is sultry; the thermometer stood at 70° at 7 o'clock this morning, and at 80° at noon. Hot or cold I welcome the Bee Journal; it is a weekly treat. I would be lost without it. Frank B. Rife.

Malaby, O., Feb. 15, 1883.

[The bees sent are hybrids. We have already published several good plans of transferring, and will give several more before the time to do it arrives, which should be during fruit bloom. We cannot say where the bees came from, but they left some place that was distasteful to them or unfit for their longer abode, and sought and found some better place.—Ed.]

What harvest follows a severe winter?

There is more mortality amongst bees, in this locality, than there were two years ago. One large apiarist, in this town, is losing very heavily, and losses are the rule. Many did not have fall pasturage, and had to be fed for winter stores; there was not much surplus last summer. Mr. Doolittle says the largest surplus, in this State, has followed severe winters; that has not been the case here, as a rule. 1868, 1870, 1874, 1876, 1878 and 1880 here were good seasons, while 1869, 1871, 1873, 1875. 1877, 1879 and 1881 were not so good, all following hard winters. The winters previous to the first named were mild with the exception of 1867 and the winter of 1870-71. The seasons of 1872 and 1882 were failures here. My average amount of extracted honey, per colony for 12 years, is 75 lbs. W. H. S. Grout.

Kennedy, N. Y., March 30, 1883.

200 Lbs. of Wax from 70 Colonies.

In the Bee Journal for Feb. 28, page 121, Mr. N. B. Tindall wishes for more light as to how I obtained 200 lbs. of wax from 70 colonies of bees, spring count. In my report I did not state that about ⅔ of my bees were in odd sizes of frames, some of which I transferred on Mr. Heddon's plan, rendering up all of the old combs; those old combs and the cappings from 9,000 lbs. of extracted honey, is the way I obtained my 200 lbs. of wax. I should have stated in my report that had my bees all been in Langstroth hives, my report would have been much larger. I think another season will see all of my bees in standard Langstroth hives; then do not be astonished at any report I make. Last year I had one continuous and heavy flow of honey from June 7, until Sept. 15, and after I had finished extracting on Sept. 20, they filled their hives, both lower and upper stories; consequently they are very strong now. I will probably give my method of making vinegar in my next, which would be hard to beat.

W. G. McLendon.

Lake Village, Ark., March 29, 1883.

Hard Winter in Canada.

This has been a very hard winter on bees; I think fully one-half the bees around here are gone. They have been confined 130 days, and are now very uneasy, and many suffering from dysentery. We have about 4 feet of snow on the ground yet, and it is freezing hard to-night.

Geo. Garlick.

Warsaw, Ont., March 28, 1883.

Corrections.

Please make the following corrections in my article on page 166 of the Bee Journal, and oblige: "The cap, which should contain about 1,000 cubic inches," should read, 7,000 cubic inches. The cap, or surplus department of all my hives, is large, and I do not think the case and cover together should contain less than 4.000 cubic inches to winter well. Also, the sentence, "but the bees seemed too warm, and *are* flying out, which, if they did much too often," should read, but the bees seemed too warm, and on flying out, which they did much too often. Dr. G. L. Tinker.

New Philadelphia, O., Mar. 29, 1883.

[The figures 1 and 7, in writing, are made quite similarly, and there the 7 is blotted and indistinct. It occurs in the eighth line of the second paragraph in the second column on page 166. The other errors in the 12th and 13th lines from the bottom, were caused by carelessness in the compositor.—Ed.]

Cheap Power for Saws.

As I have seen some inquiry, of late, in regard to a cheap power for running saws for hive making, I thought I would mention that the Buckeye mowing machine is about the best; for one that is rather "played out" can be bought for from $2 to $5. To use it, tip the machine up on one wheel, brace it up, and by digging a hole in the ground the size of the wheel and letting it down so that the tumbling rod can be attached about level with the ground, and run it out any length desired, to attach a pully wheel. To attach to it, take the tongue of the machine to fasten to the top wheel, and hitch a horse at the end to go around in a circle. This makes a good power as well as a cheap one. I wintered 25 colonies on the summer stands, with chaff inside the hive, and lost only one; the rest are in fine condition.

Dr. J. S. McAllister.

Columbus, Neb.

Wintered Successfully.

I wish to record the fact that I have wintered bees, for two winters, on sections, 8 inches square, two in a frame, wintered on from 4 to 7 frames in each hive, with the most perfect success. I arranged the sections, with their contents of honey and pollen, to suit myself. These frames are about the size of the Langstroth, and hang the long way up and down; thus holding one section above another, and are movable at will. The hives that holds these frames are chaff hives, and are protected in the usual manner, except that the entrance is nearly at the top of the frames, which is an important point; it lets out all dampness, and lets in the bees at a point where it is warm. These frames can be handled in warm weather about as easily as the Langstroth, and bees will work in boxes as well as any other hive.

JOHN L. DAVIS.
Holt, Mich.

Queenless Colonies.

Please inform me, through the JOURNAL, the best method of treating queenless colonies in the spring.

Shirley, Ont. M. STONEHOUSE.

[Either give each queenless colony a fertile queen, or a frame of eggs and brood from which to rear one, early in the spring. The fertile queen is safest and best. Later, when drones are reared, the frame of eggs and brood will do. Or, if you have a weak colony, with a fertile queen, unite the queenless colony with it.—ED.]

Meeting of Bee-Keepers.

I put 83 colonies in winter quarters, on the summer stands; and left the cloth on the frames. I put a box over the hive, packed around with hay, and covered all with a good roof. Those packed thus came out strong on April 2, as they were when put there, as far as I could see. Some, left without any outside packing, carried out from a half to a pint of bees, after the cold spell. The bee men of Joplin and adjoining country meet at Joplin, May 5, 1883, for the purpose of organizing a Society for the advancement of bee-culture, and to establish a uniform price for the products of the apiary. All who are in anyway interested in apiculture, are invited to meet with us at that time and place. The Society will hereafter meet at such times and places as may be determined.

DR. J. T. BRUTON.
Joplin, Mo., April 3, 1883.

When to take Bees out of Cellars.

When I read reports like the one in the BEE JOURNAL from J. E. Hastings', Carlisle, Iowa, page 170 (and others similar to it which the reader will call to mind), I must say I am puzzled to understand them. If I should say to the Dairymen's Association I put 20 cows into the stable on Nov. 1 and on March 1 or 16, I turned them to pasture all in good condition, what would northern farmers think of me? I can easily guess that they would say, to themselves: "If he has any left May 1 they will be a slim lot indeed, especially in such a season as this." It has been a howling month; the ground is frozen solid yet, with but very few days that bees can fly. I infer that it is very similar in Mr. Hasting's vicinity. In short, I would like to know, as long as the bees are in fine condition in their winter quarters, and considering the state of the weather, why not leave them there, even until May 1 or 15, if there should be nothing for them to do outside until that time. I think the opinion prevails among bee-keepers that cellar-wintered bees are liable to dwindle badly when set outside, in fairly good weather! I would like to see Mr. Hastings' report on May 1. I expect that he will wish that his bees had remained in the cellar and cave another 4 weeks. I packed 25 colonies in October in clover chaff, bottom, top, and sides; all are living, but 1, which was dead Feb. 15.

P. F. TWITCHELL.
Andover, O., April 2, 1883.

Large Increase and Honey Crop.

I have no doubt but what there is a difference in locality for honey; the best we can do here is the average of 30 lbs. of honey to a colony. I would be glad to have large increase and large honey crop, as Mr. Moss says he had (from 16 colonies and 3 nucleus, 3,600 lbs. of honey, and 52 increase, and all that a family of ten could use for a year); that stumps the world. I am 76 years old, but never witnessed such a thing, as the above, in my life.

WILLIAM ROBERTS.
Vaughansville, O., April 3, 1883.

Convention Notices.

☞ The Mahoning Valley bee-keepers will hold their 13th meeting in the Town Hall, at Berlin Centre, Ohio, on May 5. All bee-keepers, and the public in general, are invited to attend. Do not forget to bring your wives, children, and a well-filled lunch basket. We expect a grand meeting.

L. CARSON, *Pres.*
H. A. SIMON, *Sec. pro tem.*

☞ The Iowa Central Bee-Keepers' Association will hold their semi-annual meeting at Winterset, Iowa, on Friday, May 11, 1883. All interested in anything pertaining to bee-culture are invited to attend, and bring anything that will be of interest to the bee fraternity.

J. E. PRYOR, *Sec.*
A. J. ADKISON, *Pres.*

☞ The semi-annual meeting of the Western Bee-Keepers' Association will be held at Independence, Jackson County, Mo., on Saturday, April 28, 1883, at 10 a. m. Papers prepared for the occasion by the president, secretary and others will be read, and matters of general interest to bee-keepers discussed. A general attendance of persons interested in bee-culture is requested. The present membership of this Association control 2,000 colonies of bees.

S. W. SALISBURY, *Sec.*
Kansas City, Mo.
J. A. NELSON, *Pres.* Wyandotte, Kas.

☞ The spring meeting of the Cortland Union Bee-Keepers' Association will be held in Cortland, N. Y., on Tuesday, May 8, 1883.

M. C. BEAN, *Sec.*

☞ Quite a number of the leading bee-keepers of Missouri and Kansas met at the Court House, in Independence, Mo., December 23, 1882, and organized a bee-keepers' convention, which was named the "Western Bee-Keepers' Association," by electing the following officers for the ensuing year: Jas. A. Nelson, of Wyandotte, Kans., President; L. W. Baldwin, of Independence, Mo., Vice-President; S.W. Salsbury, Kansas City, Mo., Treasurer. The Association passed a resolution to invite all bee-keepers within a convenient distance, to meet with us at our next meeting and lend us their councils. Adjourned, to meet again at Independence, on the last Saturday in April next, at 10 o'clock, a. m. J. D. Meador, P. Baldwin, C. M. Crandall, *Committee.*

☞ The Central Michigan Bee-Keepers' Association holds its spring convention at Lansing, in the State Capitol building, on Tuesday, April 17, 1883, 9 a. m. Programme: President's address; Essays: Prof. A. J. Cook, on Wintering Bees; S. C. Perry, on Chaff Hives; C. Case, on Comb Honey; O. S. Smith, on the Best Bee; A. D. Benham, on Extracted Honey; Mr. Harper, on Queen-Rearing; Mr. Waldo, on Best Method of Wintering Out of Doors, in Single-Walled Hives; E. N. Wood, on Sections; and E. Greenaway, on Comb Foundation. All bee-keepers are invited to attend or send essays, papers, implements or anything of interest to the fraternity A full attendance is requested.

E. N. WOOD, *Sec.*
North Lansing, Mich.

☞ The spring meeting of the Western Michigan Bee-Keepers' Association will be held at Supervisor's Hall, Grand Rapids, April 26, at 10 a. m.

F. S. COVEY, *Sec.*
Coopersville, Mich.

☞ The Texas State Bee-Keepers' Association will hold its Fifth Annual Convention at McKinney, Collin Co., on Tuesday and Wednesday, April 17th and 18th, 1883; at the residence of Hon. W. H. Andrews.

WM. R. HOWARD, *Sec.*
Kingston, Texas.

☞ The Union Bee-Keepers' Association will meet in Grange Hall, Eminence, Ky., on Thursday, April 26, 1883. All bee-keepers, and the public generally, are invited to be present.

G. W. DEMAREE, *Sec.*
Christiansburg, Ky.

☞ The Southeastern Michigan Bee-Keepers' Association will hold their next meeting at Adrian, Mich., April 18, 1883. All are invited. Reduced rates at hotel.

H. D. CUTTING, *Pres.*
Clinton, Mich.
H. C. MARKHAM, *Sec.*
Ann Arbor, Mich.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Sections, Honey Board, Etc.

Will Mr. Heddon please answer the following questions through the BEE JOURNAL? And oblige a reader of all your articles, and one that thinks a great deal of them.

1. In using one-pound sections, is it best to use one or two tiers, in surplus-chamber, same as in brood-chamber?
2. What is the best time and way to fasten brood comb from larger frames into the Langstroth frame?
3. Please describe the honey board that you use between the brood and surplus-chamber? A. H. GIVEN.

Elgin, Ill., April 3, 1883.

[1. Whether I used a case or brood frame super, I should never use either more than one tier high.

2. In these days of comb perfection, I should never transfer combs unless they were all worker, perfectly straight, and large enough to completely fill the frames, and then if you have a flat top bar, nothing is necessary if you cut and press in the comb properly. Thorns put through bradded holes, in the top bar, are good to secure the combs till the bees make them fast.

3. My honey board is described on page 201, Weekly BEE JOURNAL, 1882.—JAMES HEDDON.]

Preventing After-Swarms.

I liked your article very much on "Preventing After-Swarms." I understand from it that you did not give the old colony a laying queen immediately, forcing them. Is it not advisable to do so? DWIGHT FURNESS.

Furnessville, Ind.

[In back numbers of the periodicals and in conventions, I have always contended against the plan of rearing and fertilizing queens to be used for the queenless part of a divide, or in natural swarming. A cessation from egg laying is just fitted to the condition of the mother colony at the time when the natural division does, or artificial division *should* occur. There is no better place in which to hatch cells than this old colony; none any where near as cheap. Do not let us get ahead of the old farmer any faster than will pay. Let our advancements be real. Mr. Doolittle's article on page 174 of last issue contains most of the arguments that I have used. I differ with him regarding the point of the introduction of the new queen to the old colony, producing further swarming. It will not, here, or any where else, that I know of, for nothing tends more to prevent the swarming impulse than the introduction of a young queen. The real objections are that it is a useless expense, of time, for the cessation of laying is just to our advantage at that season of the year. This is another point on which the "advanced" ones used to "churn" me upon.—JAMES HEDDON.]

Chocolate for Pollen.

As a suggestion, what do you think of sweet chocolate as a substitute for pollen? My bees are highly pleased with it. WM. D. FRENCH.

Grand Rapids, Mich.

[I have never heard of chocolate as a substitute for pollen before. You must find out by experimenting. Here in my location, and I believe the same is true in yours, there is nothing gained in early breeding. I am satisfied that all the sacks of flour I ever fed were worse than wasted.—JAMES HEDDON.]

Keeping Honey in Summer.

How can I keep extracted honey from souring in summer; and also comb honey from candying? N. S. DEAN.

Hooper's Valley, N. Y.

[Do not extract your honey till it is capped over, and there is no danger of its souring. If you do extract it in a thinner state, store it in 1 gallon stone jars, piled 8 or 10 high, with sticks between them, to allow a circulation of air across the top surface of the honey. It can thus be stored in a very small compass, in proportion to quantity. The room containing it should be dry and airy. To keep comb honey from candying, have all capped before removing from the hives, and keep it in an airy and warm room. Keep warm in cool weather.—JAMES HEDDON.]

◆

☞ On page 183, center of middle column, answer 4, read: "A majority seem to think so, though minorities," etc. No matter where the error was made, let us have it as near correct as possible. I have to write *on the run*. [It was not so written.—ED.] I must *refuse* to answer questions not pertaining to business, except through the Question Departments I have agreed to. 1. Because I cannot get the time to do it. 2. Answers in the Departments save an endless repetition of the same questions. If they are repeated, I can refer to former answers.—JAMES HEDDON.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., April 9, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The nominal price of extracted is 7c. for dark and 9c. for light—here. The supply is abundant and sales are slow.

BEESWAX—None in the market.
AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—There is no excitement in the honey market, but sales are fair to our regular trade. Offerings are plentiful of extracted and comb honey. Extracted brings 7@9c. on arrival. The sales of comb honey are very slow, although there is a large supply of first-class quality on the market. It brings 12@18c. on arrival.

BEESWAX—Comes in slowly and brings 20@30c per lb., according to quality. CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand is light and it is not now probable that all of the comb honey can be sold before a new crop comes. Prices are very irregular and generally low: 15@16c. for white, and dark unsalable. Extracted, very little trade is being done in it. 7@9c. is about the market.

BEESWAX—35@36c.
R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—Buyers are readily obtained for choice comb or extracted at full figures, but off qualities meet with slow sale.

White comb, 14@17c.; dark to good, 11@13c.; extracted, choice to extra white, 8½@9½c.; dark and candied, 5@7½c.

BEESWAX—We quote 30@33c.
STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Very quiet; dull. Comb at 14@16.—some inferior sold at 10c.; strained at 6½@7c., extracted at 7½@8½c., lots in small packages more.

BEESWAX—Scarce and wanted at 33@34c.
W. T. ANDERSON & CO., 117 N. Main Street.

CLEVELAND.

HONEY—Is a little lower, and at the lower price it has moved off a little better of late. 1-lb. sections of best white sold at 18½@19c.; second grades, 1-lb., 17c.; 2-lb. sections a little slow at 17@18c. Extracted very dull at 9@11c.

BEESWAX—None in market.
A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—Our supply is gone; we have none to quote.
CROCKER & BLAKE, 57 Chatham Street.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

◆

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the Bee Journal.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ Postage stamps, of one, two or three cent denomination, accepted for fractional parts of a dollar; but money is preferred.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts each, or $8 per 100.

☞ We have a few copies of our pamphlet entitled "*Bee Culture*" left, and have reduced the price from 40 to 25 cents each, or $2 per dozen.

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1 year, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with $6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For four subscribers, with $8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with $10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly Bee Journal for one year.

To get any of the above premiums for the Monthly Bee Journal send double the number of subscribers, and the same amount of money.

☞ "The Bonheur des Dames; or, The Shop Girls of Paris." Emile Zola's new novel, just published by T. B. Peterson & Brothers, Philadelphia, is his greatest, most finished, and most absorbing romance. It opens up an entirely new field in fiction, and will be seized upon with avidity by countless hosts of readers. In nothing Zola has written is his vivid naturalism so pronounced. The scene is laid in the "Bonheur des Dames" dry goods store, an immense Parisian establishment, employing a whole army of girls and men. Zola pictures this store from its modest beginning, showing how it grew day by day, ruining rival houses, and gradually monopolized all the business of a vast quarter of Paris. The daily life of the shop-girls and salesmen, their trials, troubles, temptations and triumphs are depicted in the most graphic and realistic fashion. The heroine is one of the shop-girls. She goes through the same experience as the others, but differs from the majority of Zola's heroines in preferring purity to dissipation and its gilded allurements. She is, in short, a good girl; pure, guileless and innocent. Snares are set for her, but her very purity enables her to escape them all and come out unscathed from many a trying ordeal. She ultimately reaches a suitable social position, attaining fortune and happiness. Price 75 cts.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 50
" 200 colonies (420 pages)	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Bees for Sale!

200 or 300 colonies of Italian bees, in Langstroth hives, in good condition. Price: Single colony, $6.50; ten or more, $6.00 per colony. Hybrids, 50 cents less. I will guarantee safe arrival.

C. GRIMM,
14A6t Jefferson, Wis.

JUST OUT!

New circular and price of Bees and Queens. Also, STENCILS for bee-keepers' use.

JOS. M. BROOKS,
4B6t Columbus, Ind.

FOR SALE—ITALIAN BEES.

Five to seven dollars per colony.

E. A. GASTMAN,
15A1t 5B1t Decatur, Ill.

COMB FOUNDATION.

Owing to the scarcity of beeswax, the prices of comb foundation will hereafter be as follows:

	Dunham.	Thin.	Extra Thin.
10 lbs. or less.	55c.	65c.	72c.
25 " " ..	54	64	71
50 " " ..	53	63	70
100 " " ..	52	62	69

ALFRED H. NEWMAN,
923 W. Madison St., Chicago, Ill.

Cheap! Cheaper!! Cheapest!!!

300 COLONIES OF BEES

for sale, in movable frame hives. Also, Queens, Nuclei, Bees by the pound, Hives, Sections, Smokers, Seeds for Honey Plants, and everything a live bee-keeper needs. Send for circular and price list to **FLANAGAN & ILLINSKI,**
Box 819, Belleville, St. Clair co., Ill.
(Proprietors of Rose Hill, Cabokia, Falling Springs and Lake Apiaries. 1ABly

What Shall I Feed my Bees?

To stimulate early breeding and insure **STRONG COLONIES** is the all important point. Cotton-seed-meal which contains far more nitrogenous material than any other vegetable product except pollen. See instructive article by Arthur Todd in the Bee Journal, page 162. I can furnish a prime article at 3½c per lb., or 3c if more than 50 lbs. are ordered. GEO. E. BOGGS, Morgan, Ky. 15A1t

Vandervort Foundation Mill.

6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

ALFRED H. NEWMAN,
923 West Madison-st.,
CHICAGO, - - ILLINOIS.

NOTICE.

You have bought me all out of my prepared stock of hives and shipping crates in the flat. I can't make any more, and fill other orders promptly, and perform my desk labor. I can't trust any one else to do it. Will you please scratch from my list, "Hives and Shipping Crates in the Flat?" I will furnish hives made up, honey boards, brood frames and sections in the flat, and in fact all other goods advertised in my circular, the same as before.

JAMES HEDDON,
Dowagiac, Mich.

OLDEST BEE PAPER IN AMERICA
THE AMERICAN BEE JOURNAL
ESTABLISHED IN 1861

VOL. XIX. CHICAGO, ILL., APRIL 18, 1883. No. 16.

THE AMERICAN BEE JOURNAL
Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR,

New Book on Queen Rearing.

Mr. Henry Alley's new book on Queen Rearing is received, and we are very well pleased, not only with its contents, but also with its typography and binding. It is a handsome octavo of 200 pages, and contains 20 illustrations.

This is one of the subjects upon which "more light" has been demanded for some time past, by progressive apiculture, and we are glad to welcome this work of Mr. Alley on the subject, because he is a successful and experienced queen rearer, and also because he gives details of the methods he now practices, after many experiments covering a period of 22 years, during which time he has, perhaps, produced and reared more queens than any other breeder.

Of course, there are many things stated in the book which we cannot endorse, and also much that we think needs confirmation—still it is a valuable addition to the sparse literature on "Queen Rearing" now extant. Considerable of the repetition will no doubt be eliminated from the next edition.

In the Preface, Mr. Alley remarks as follows:

> I need not state that this work was not intended as a literary effort, as indeed I make no pretentions in this respect. I have endeavored to present to my readers a work that will be beneficial and advantageous to them and have tried to avoid all that is superfluous or ambiguous, believing that plain, practical common sense is far preferable; and if it meets with general approval I shall rest content. I claim that my method of rearing queens is new and original, being the results of my long experience in queen rearing and practical apiculture.
>
> By the careful study of this work, and by putting into practice the directions herein given, one will experience no difficulty in rearing queens of a superior quality. Let it ever be our aim to rear *better* not *cheaper* queens.

We have waited long for the appearance of the work, but have lost nothing by the delay. Mr. Alley says: "The long delay in the publication of the Bee-Keepers' Handy Book, was unavoidable, and was caused mainly by the addition of nearly 75 pages to the work more than was originally intended. My readers will profit by this gain, which is a loss to me of over $100.00." Now that it has been issued, we can cheerfully forget the delay, and attribute it to the author's inexperience in the business of publishing.

In his Introduction the author remarks as follows:

> The present and future interests of apiculture demand a more thorough and practical method of rearing queens, and I shall endeavor in this work to give my readers such information as shall tend to give a new impetus to this branch of bee-keeping, and also aid, if possible, in doing away with the cheap and worthless queens produced under the lamp nursery system; and to offer to the bee-keeping public, for their careful consideration and adoption, a thorough, practical and scientific method of queen-rearing, which is the result of many long years of practical experience, and much hard study.
>
> In order to become a successful instructor one must first attain a complete knowledge of the subject to be taught, and unless it has been thoroughly and fully mastered in all its details, failures only can result.
>
> In presenting this work to the bee-keeping fraternity, I do not wish to assume the position of teacher, but rather to place before its readers in as plain and practical a manner as possible my method of rearing queens, leaving to their judgment the careful study, and candid criticism of its contents, feeling assured of a favorable decision regarding its merits and value; knowing that if its instructions are carefully studied in all their details, and put to a practical test, the result will be successful. By careful attention to all the rules laid down herein, I hope better queens will be produced, a matter of great importance to the bee-keeper whether he keeps bees for pleasure or profit; and of vastly more importance to the bee-master who follows it as a vocation and depends upon the same for a living.

He then enters into details of the *modus operandi*, by which these "better queens" are produced, and describes his methods and management. A chapter is also devoted to each of the following subjects: Transferring Bees; Spring and Fall Feeding; Wintering Bees; Keeping Bees for Pleasure and Profit, and General Remarks, which includes a multitude of subjects.

Two essays are also incorporated into the work, the first being on "Management of the Apiary; or, the Production and Marketing of Honey," by G. W. House; the other is on "The New Races of Bees," by S. M. Locke. Both of these are very interesting and instructive.

This new work should be in the hands of every practical apiarist, and is worth many times its cost to any one having the care and management of bees. It can be obtained of the author, at Wenham, Mass, or at this office.

* * *

☞ Quite a number of the new subscribers, who have begun to take the JOURNAL this month, ask if we can supply the numbers from Jan. 1, 1883. We would say that we can supply a few more sets, and if any want them they must be sent for *soon*, or they cannot be obtained. We can supply no more numbers of 1882. They are all gone.

* * *

☞ The 23d annual St. Louis Fair will be held Monday, Oct. 1, to Saturday, Oct. 6, 1883, both days inclusive.

* * *

☞ Articles for publication must be written on a separate piece of paper from items of business.

Glucose—A Scrap of History.

Mr. W. H. Graves, Duncan, Ill., has sent us the Peoria *Journal*, of Feb. 13, 1883, which contains some historic items of interest on the glucose industry which has been so detrimental to honey producers. It says:

One of the curiosities of trade in these latter days, is exhibited in the rise, meridian and decline of the glucose industry. Less than five years ago the general attention of the commercial world was directed to glucose. Beginning in Germany it was first manufactured from wheat. It was carefully made by experienced chemists, who personally superintended its manufacture through every stage. An excellent product was the result, which, being placed on the market, found a ready sale at prices which yielded immense profits.

It was not long before the process of manufacturing glucose was known in the United States. Works were erected in Buffalo, N. Y., at a time when this country was in the throes of a financial panic, and when everything in the shape of labor and material could be obtained at remarkably low figures. Immense factories were erected at a minimum cost, tons of machinery were procured for about the value of old iron, corn was away down among the thirties, and labor was begging for employment. Under all these favorable conditions, the glucose factories, that were first in the field, made vast sums of money. A profit of several hundred per cent. per month, on the original investment, was only a circumstance.

New uses for the manufactured article was discovered daily. Its first extensive use was in the manufacture of confectionery. Then it became an adulterant of molasses, for which hundreds of thousands of barrels were used annually. Solidified and placed on the market as grape sugar, it was used to mix with the lower grades of cane sugars. It crept into the pharmacist's laboratory, and there made itself generally useful in several ways. The brewer hailed it joyfully, and it found a temporary abiding place in his capacious vats before lubricating many a parched esophagus, in the shape of lager beer.

Then did glucose find favor with the capitalist. It had an almost universal demand; it could be made from corn, the cheapest of grain, and the process of its manufacture was as easy as eating cheese. All that was necessary was to soak the grain in water for so many hours, grind it between burrs while wet, run the slop into tubs to allow the starch to settle, drain off the water, dump the starch into another vat with sulphuric acid to convert it into sugar, neutralize the acid by adding marble dust, strain the product, boil it down to syrup in a vacuum at a low temperature, strain through bone charcoal, and finally through felt presses, and the syrup was ready for the barrel.

Thus amazed at the apparent simplicity of the process of manufacture, and dazzled by the tangible profits on the investment, capitalists took kindly to the new industry, and glucose factories sprung up all over the country.

About the time that everything was in readiness for turning out glucose and coining money, the country began to recover from the effects of financial depression. The price of corn advanced from 30 cents to 80 cents, at which figure the manufacture of glucose ceased to be gratifyingly profitable. Higher wages were demanded and paid, and competition, which, by this time had grown sharp, lowered the market price for the finished goods. To add still further to increasing perplexities, it was found that the process of making glucose was not so simple as it seemed. An expert chemist, at a princely salary, was a necessary adjunct to every corn sugar works, and even then not one in ten of these alleged experts could turn out a pure article at a profitable figure. Other drawbacks arose. The factories were extremely liable to destruction by fire, necessitating high insurance rates; the cane sugar crop for a year or two was abundant, and consequently reduced in price, and a new process was discovered for making cheap sugar from sorghum.

All these forces have combined to give glucose a discolored optic. Two years ago the corn sugar factories in Peoria consumed 10,000 bushels of corn a day. Now but 2,000 bushels are used daily. One of the factories burned down, and was rebuilt with only one-third of its former capacity. The other factory has been closed for nearly six months, and now stands deserted. Of 20 glucose works in the United States that were running at full capacity a year ago, only six are running to-day, and five of them are running at reduced capacities. Fortunes, instead of being made, have been swallowed up in glucose slop. Hamlin, of Buffalo, and Chaffee, of Tippecanoe, Ind., are the only men who have made fortunes at the business, and they were the first in the field.

This is the history of the glucose industry; bright at its dawn, cloudy at its noonday, and gloomy in its night—mighty but ephemeral, so does it pass before us as one of the commercial curiosities of the nineteenth century.

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Seasonable Hints.—The *Indiana Farmer* gives the following hints to beginners about handling bees:

Gentleness and firmness are necessary qualities in the handling of bees. Sudden jars and quick active motions should be avoided as much as possible. During a good honey flow there is little if any danger of being stung, with anything like fair treatment for the bees. With little honey coming in, they are much more liable to resist interference. By the judicious use of smoke they may be controlled with but little trouble, and while it is not necessary to resort to this under all circumstances, it is best to have the smoker ready so that it can be used if the occasion requires it. The construction of hives, too, has much to do with the handling of bees. The frames should hang so that they may be taken out without first having to pry them loose, for there is nothing that will arouse their anger sooner, than the sudden snapping and breaking loose of a frame. Where the frames must be pried loose, one should be provided with a strong-bladed knife, or small screw driver; pry the frames loose, one at a time very gently, loosening all of them before removing any. In fact anything about a hive that must be pried loose should be manipulated carefully.

It is the instinct of the bees to fill themselves with honey when disturbed. Smoke seems to do this more effectually, with less danger of angering them, than anything else. But the smoke has no effect on the bees only as it causes them to fill with honey. This is the object of its use and it is beneficial in no other manner, unless it be simply to drive them out of the way. They seem to fear the smoke and offer less resistance to it, although, if given too much, it may make them very angry. Preparatory to opening a hive, smoke should be blown into the entrance, not too much at once; better two light applications at short intervals.

After the bees have had time to fill themselves, remove the cover, raise gently one corner of the cloth over the frames, or what ever they may be covered with. If they still show resistance, give a little smoke at this place, and with very few exceptions they will submit to anything in reason; but bear in mind, the mashing of a bee, the dropping of a comb, or accidents of like kind may cause them to strike for liberty or death.

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Bee Notes for April.—The *American Agriculturist* gives the following on the results of the past winter among the bees:

Although bees should be set on the summer stands in April, even in the more Northern regions, still they should be closely covered with warm packing. For two years we have put into our cellar chaff hives and hives with single walls, all containing bees. These were set out at the same time. The bees in single hives were closely covered with a sack containing fine sawdust. This was so long that it not only covered the hives, but reached over at each end, and hugged the division-boards that confined the brood-chamber. So far as we could discover, the bees in these hives suffered no worse from "spring dwindling" than did those kept in chaff hives. If future experience sustains this point, then the argument that chaff hives are desirable, because they are safer in spring, is of no importance. The past severe winter will enlighten us on this subject. We shall be mistaken if it does not raise cellar wintering to a premium. Such long confinement, with severe cold, is very hard on bees. If chaff hives prove equal to the situation, this winter, then their value is assured.

CORRESPONDENCE

For the American Bee Journal.

Rearing Queens—Nuclei System.

W. Z. HUTCHINSON.

I have learned that nothing is gained by commencing operations very early in the season. Colonies are weakened, brood is chilled, and queens do not lay until they are two or three weeks old; in fact, there are only unpleasant features connected with commencing before warm weather has really come to stay; which, in this latitude, is usually about the 10th or 15th of May.

My first step is to put a nice, clean, light-colored worker comb in the centre of the colony, having the queen from which I wish to breed. In three or four days I generally find this comb filled with eggs, the oldest of which are beginning to hatch into larvæ. I now remove the queen and all the brood from some strong colony, shaking the bees from the brood combs back into the hives, and dviding the brood among the weakest colonies. The queen is either sold or given to a nucleus prepared expressly for her. The comb of eggs and larvæ from the choice queen is now given to the queenless and "broodless" colony. I usually cut a few holes in the comb, just where the eggs are beginning to hatch, as it gives the bees better opportunities for building queen-cells. The date that the cells are to be removed, is marked upon the top-bar of the frame, and this date is also written upon a Record Board, fastened up in a conspicuous place in the shop. This board is examined each day, thus no batches of queen-cells are forgotten and neglected until some of the queens hatch and destroy the whole lit of cells. When a batch of queen-cells are taken from a hive, the date of that batch is scratched from the board, and when a new batch is started, the date that they must be removed is written upon the board. I have found nine days about the right time for leaving a comb of eggs and just-hatched larvæ in a queenless colony; the brood is then all sealed over, and the queen-cells well ripened, but no queens will hatch in that length of time. I never shake the bees from a comb upon which are queen-cells, as, if the queens are not far advanced, the sudden jar will often dislodge them from their bed in the royal jelly, and they fall to the lower end of the cell where they perish, while, if they are farther advanced, but not fully developed and hardened, the result may be queens with crippled wings or legs. I place one edge of the comb upon the ground near the entrance, coax off as many bees as I can with the smoker, and then brush off the remainder with a feather. After removing the comb of eggs from the colony having the choice queen, its place is filled with another nice comb or sheet of foundation; and in three or four days this will be filled with eggs, and can be given to another queenless colony. With 125 nuclei I have found it necessary to start a lot of queen-cells every day. I seldom allow a colony to build more than two lots of queen-cells, when I give it a laying queen.

A day or two before I expect the first lot of cells to hatch, I start as many nuclei as there are cells. Early in the season I seldom start more than one nucleus from each colony, and I do this by taking three combs with the adhering bees and placing them in a nucleus hive, taking care, of course, not to remove the old queen. At least one comb should contain brood, and it is better that a little of it should be unsealed. As the weather becomes warmer, more nuclei are formed by taking combs with the adhering bees from these three-frame nuclei, leaving only two combs in a nucleus. More nuclei are also formed by taking more combs with the adhering bees from the full colonies. If a colony can spare only one comb, it can be taken and put with a comb from another colony, and thus form a nucleus. I have had no trouble from bees quarreling when they were united or mixed up.

I consider it important to always have on hand a good stock of queen-cells. A breeder cannot rear queens at a profit if he allows some of his nuclei to remain queenless several days for lack of queen-cells.

When honey is coming in plentifully, I prefer to put a laying queen upon the combs of the nucleus at the same time that I remove the laying queen, but when there is a scarcity of honey, this plan does not seem to work so well, unless the bees are fed, as some of the young queens are killed by the bees. I have frequently introduced young queens that were three days old; and one breeder, with whom I talked last winter, says that he has often made a practice of keeping virgin queens until they were five or six days old before introducing them, they would then often become fertilized the next day after they were introduced, and five days' time would thus be gained. Before introducing, these young queens were kept confined, each queen by itself, but accompanied by a few workers against the side of a comb of honey kept hanging in the lamp nursery. The cages used to confine the queens were similar to a cover of a tin pepper box, only the tops were wire cloth; in fact, they were the cover to some discarded "Harris mailing cages." A queen and five or six workers were placed under a cover, then give the cover a turning motion, combined with a slight pressure against the surface of the comb of honey, which caused the sides to penetrate the comb sufficiently to keep the cage in place. To introduce one of these queens the bees were shaken from the combs of a nucleus upon the ground, near the entrance, the queen put into the nucleus, the nucleus closed except the entrance, and then the bees allowed to run back in. He seldom lost a queen in introducting them, and had been unable to discover that this practice injured the queen in any respect.

One more point I consider important, and that is that no nucleus shall remain a single day without unsealed brood. Attention to this matter saves a world of trouble, and largely increases the profits.

Rogersville, Mich.

For the American Bee Journal.

Ventilation of Bees.

S. CORNEIL.

I agree with Dr. Tinker in the opinion that the only really troublesome factor with which bee-keepers have now to contend, is the best mode of winter ventilation. Sometime ago I completed a sort of digest of articles on wintering, and of everything said on the subject as reported in the proceedings of bee-keepers' conventions. This comprised all I could find relating to wintering in 36 volumes of the current periodicals, and in the standard works on bee-culture. The items, thus gleaned, were then classified and arranged under such headings as Cause of Dysentery, Cure of Dysentery, The Pollen Question, Where Wintered, Protection, Condition of Cellar, Temperature, Ventilation of Repository, Stores, Upward Ventilation, Lower Ventilation, Side Ventilation, No Ventilation, Space Below Combs, Results, etc. From reading the apparently contradictory theories and plans for wintering, scattered through the bee papers, one is often at a loss to know which method to adopt. On this subject, a prominent bee-keeper writes as follows: "The reports about wintering are so conflicting that they point to nothing definite, and I confess that I am wholly ignorant of the whole matter." But when the evidence is arranged under such headings as the above, and carefully examined, and the degree of intelligence and success of the observers are taken into account, I am quite sure my friend would agree with me that the weight of evidence is overwhelmingly in favor of the opinion that the removal of vitiated air as fast as it is produced, and the substitution of fresh air in the place of the foul air so removed, is the plan which has proven to be most successful, and that to the want of this change of air can be traced an exceedingly large proportion of the cases of disaster.

The principles constituting the science of ventilation are always the same, whether considered with respect to hives containing bees, the cellar containing the hives, or the apartments above occupied by their owner. Let us see if what is known regarding those principles cannot be made to assist in providing proper ventilation for our bees.

We are told "The necessity for change of air in inhabited spaces is rendered evident by considering the sources of contamination. They are: *a.* The production of carbonic acid gas by respiration. *b.* The increased moisture from the same source, and from exhalations from the body. c. Heat thrown off by the occupants."

The object of ventilation, therefore, is to remove the air thus vitiated, and so substitute pure air, of the proper temperature and humidity, in its stead. We are further told, "Every person is surrounded by an envelope of vitiated air, and the thickness of this envelope is dependent upon the direction and velocity of the air past the person." This is equally true when applied to a cluster of bees instead of a person. The extent of the contamination is sometimes determined by the increased quantity of carbonic acid, and sometimes by the increased quantity of aqueous vapor found in the air. An eminent authority says: "To measure the additional amount of moisture at any point is, therefore, to determine the foulness of the air at the same point." It has been calculated that the consumption of 30 pounds of honey, by a colony of bees, will produce 140 barrels of steam, or about a barrel per day while they are in winter quarters. Suppose they only consume 10 pounds, each colony will evolve a barrel of steam every three days, a quantity so great as to make it imperative that it be ventilated out of the hive, and hustled up the chimney with as little delay as possible.

In a former article, page 728, Bee Journal for 1882, I pointed out that the conbustion of the saccharine part of the food produces only carbonic acid gas and water as excreta evolved by respiration and evaporation, and that the surrounding air must be in a condition to take these up as fast as produced, to keep the bees healthy. The necessity for evaporation, and the conditions under which it can be carried on, may be gathered from the following statements as regards ourselves, and they have even greater force when applied to the bees.

"For health the body must evaporate a quantity of water within certain limits. The amount evaporated, is influenced by the hygrometric condition of the air," * * * "It does not hurt a young, strong, healthy person so much to draw the water out of him too rapidly, or too sluggishly, as it does an old, feeble or sick person, but the health of the most vigorous man is gradually undermined by any extended persistence in living in air, which has either a great excess or or deficiency of moisture; and one of the greatest difficulties about it is, that in nine cases out of ten, he does not know why his health has failed." In the winter of 1880-81, we had nearly four months of excessive moisture in the air, without any break or let up to it. If there had been spells during which the air was dry, so that the bees could get dried out and take a fresh start, it is probable they would not have suffered so much. It seems to be the long continued excess of moisture that is most injurious.

The atmosphere is the great absorbent upon which we all have to depend. As remarked by the president of our Ontario convention, last fall, the so-called mechanical absorbents are merely transmitters of moisture from the bees to the surrounding air. When intelligently handled, the atmosphere is the most efficient as well as the cheapest absorbent bee-keepers can employ. Let us examine this matter a little. Air at zero is saturated by a very small quantity of vapor, and can then absorb no more. On the 12th of December last, we had a silver frost, the temperature being down to 8° at 7 a. m. The women complained that the clothes put out on the line, would not dry as usual. The reason was, because the air was already saturated, and could not evaporate water from anything.—Suppose we take a sponge saturated with water and compress it. While compressed it may hold, say an ounce of water, but it will still be fully saturated, and can take up no more. But remove the pressure, and presently it is increased in bulk, and, although, it still contains the ounce of water, it is now thirsty for more, and is capable of absorbing several ounces in addition. At zero, 545 grains of watery vapor will saturate a cubic foot. Raise the temperature to 32°, and it will become so thirsty for vapor that it will require 2,126 grains to saturate a cubic foot, and at 70° its greed for moisture will be so increased that it will require almost 8 grains per cubic foot to produce saturation. Heating air does not dry it in the sense of taking moisture from it; it only renders it greedier for more.

I am not forgetting the fact that, although the air in the hive may be very damp yet, being of lower temperature, as it permeates the cluster and is breathed by the bees, its temperature is raised, and is in this way rendered capable of taking up the water from the body of the bee. The extent of this increased capacity will depend upon the heat of the cluster. Prof. Newport says this is sometimes as low as 30°, but I have found it to be between 60° and 70° with the surrounding air at °40. It is doubtless owing to this fact that bees are able to live as long as they do in badly ventilated hives. But I confidently make this statement, that when vapor is produced by the cluster of bees faster than it escapes from the hive by ventilation and diffusion, or faster than it is diluted by the quantity of air contained in the hive, it is only a question of time till the bees will have to succumb to the effects of moisture and pernicious gasses, and the length of that time will depend upon the strength of the colony, the readiness with which diffusion takes place through the material surrounding the bees, the quantity of air contained in the hive to dilute the vapor and gases, the extent of the openings for ventilation, and the relative humidity of the air entering the hive from without. People often wonder why some colonies die, while others alongside, apparently in the same condition in the fall, come through all right. It is hardly possible to find colonies exactly equal in all the above particulars. A closer examination would doubtless show differences in the conditions sufficient to account for the different results. But we are told that the humidity of the external atmosphere has no relation to bee mortality. No engineer of eminence will be found to make the statement that the relative humidity of the external air has no relation to good ventilation. As a matter of fact, it is a factor always taken into account. In laying stress on this element in the case, I do not stand alone amongst the bee-keepers, nor can I claim priority in bringing it forward. On page 727 of the Bee Journal for 1882, Mr. F. Della Torre says: "When the atmosphere outside is damp, that in the hive is more so, for it has the large amount additional from the breath of the bees added to it." On page 70 of *Gleanings* for 1882, Mr. George Grimm calls attention to this as an element of importance which has generally been overlooked. He claims that the natural moisture contained in the air affects the honey, the bee-bread, and the bees themselves, and frequently leads to disease. Mr. James Heddon says that, in his climate, "out-doors rivals the poorest cellars for damp atmosphere; in fact, it far exceeds them." If we knew exactly how damp it is, it might possibly furnish a clue in discovering the reason why dysentery "gets there" pretty badly at times in spite of his skill as a bee-keeper. One of the largest bee-keepers on the continent gave it as his opinion recently, that the air in the neighborhood of Mt. Healthy, O., is comparatively dry, and that this is one reason why Mr. J. S. Hill has been so uniformly successful in wintering, but, as in Mr. Heddon's case, we have no reliable data on the matter.

The following cases will serve to illustrate the application of the foregoing principles, and possibly be of service in helping to save some of the bees now suffering from dysentery.

On page 346, of the Bee Journal for 1881, Mr. G. W. Zimmerman says, that on one occasion, when bees were dying from dysentery, his 65 colonies were uneasy, very wet and distended. He heated a room with a stove, removed the quilts and entrance blocks. "All the bees that were affected with dysentery came out over the hives. I did this twice from evening till midnight, keeping the room dark. They all dried off and clustered quickly back in their hives again. They had discharged their feces going out and coming back. The result was, I saved all but two queens.

In the same volume, page 129, Mr. S. Valentine describes how he cured several colonies of dysentery by making an opening 2½x4 inches, covered with wire cloth directly over the cushion. In a few days he found that those that were almost helpless had become dry and bright.

On page 268 of *Gleanings* for 1876, Rev. M. Mahin, D. D., describes a case in which he found the whole interior of his hives dripping wet, and the bees dying through lack of ventilation. He removed the honey-boards and replaced them with pieces of carpet. After a few days he found the hives dry, and the bees healthy.

They both wintered and springed well.

Mr. M. H. Snyder tells, on page 583 of *Gleanings* for 1881, how he saved his bees, which were dying of dysentery, by raising the hives above the bottom board and loosening the enamelled cloth with which they were covered. A few days after, all were dry and in good condition.

On page 593, of the same volume, Mr. G. W. Stitts tells how he cured two colonies half-dead with dysentery, by heating the hives and packing hot cushions and hot bricks over them, and by repeating this once a week for three weeks, they were effectually cured.

On page 452, of the same volume, Dr. Jesse Oren relates how he succeeded in wintering bees in box-hives by inverting them and tiering them up in the cellar; how, he also succeeded with Langstroth hives in the same way, leaving the holes in the honey-board open, and keeping them apart by strips of wood, and how, when this was neglected, he had dysentery in his strongest colonies early in the winter. He says: "I took off the honey-boards, shoving them forward about 2 inches, and then re-piled the hives. This soon ended the dysentery. Bee-bread may have excited the disease, but ventilation ended it with me." It will be at once seen that the above are clear cases of cures by improved ventilation, giving the bees a chance to dry out. Comment is unnecessary.

Lindsay, Ont., March 7, 1883.

For the American Bee Journal.

Reply to Dr. Tinker.

JAMES HEDDON.

I may be in the dark regarding the popularly supposed great advantages of the Langstroth shallow air-chamber above the brood frames, and the surplus receptacles. I may also be in error regarding my supposition that almost all practical producers were enjoying said advantages. I did really think that most of the more experienced bee-keepers, who read our controversy, were laughing at the idea of the barbaric method of resting the sections, or any bar that might support them, down flat on the brood frame top bars.

The Doctor thinks it "strange" that the bees will go through a honey-board and two air-chambers and enter the surplus receptacles just as soon as the flow of nectar begins. Now, Doctor, all that you need is proper arrangements, and the "strangeness" will all resolve itself into simplicity. I would tell you all about these arrangements if it was not for the fact that I am foolish enough to be using these things that I have found best, and tricky enough to be selling just what I use, and you would then accuse me of "advertising."

I am glad that the Doctor and I see nearly enough alike about the half-pound sections, that we mean to give them a trial the coming season.

The Doctor should have quoted some one beside Mr. A. G. Hill as authority in favor of the ancient practice of resting the sections directly on the brood frames. I wonder at his judgment in selection. I have long tried to get a missionary to visit Mr. Hill, but all are afraid of being eaten. Such things have occurred. Well, Doctor, let us leave the matter of the advisability of leaving out the third claim of Mr. Langstroth's invaluable patent to the judgment of the future practice of bee-keepers. It took years to teach us the numerous advantages of this "shallow air-chamber," but we learned it to stay (I think), and it is my sincere conviction that none will do without its splendid features long. Upon this subject, I long ago "cast out the beam," and feel sure the Doctor will cast out his, ere long.

Dowagiac, Mich, April 5, 1883.

For the American Bee Journal.

Results of My Winter Packing.

E. C. CRANE.

Having had many inquiries concerning the result of my manner of packing, I desire to answer them in the columns of the BEE JOURNAL.

I had 12 colonies, spring count, in 1882; sold 15, and furnished 12 swarms for the woods. I sold 2,000 pounds of comb honey in one and two-pound sections, at an average of 17½ cents per pound, and put 37 colonies into the cellar and 12 on the summer stands, in a shed, open to the south, for the winter, making 49 colonies in all.

I use the improved Quinby hive in preference to four or five other hives I have tried, or any other kind, all things considered. The large (11x18) sensible frames for the brood-chamber, with their two movable division-boards, gives the operator the most perfect control, in directing the energy of his bees to the special object desired, in the different honey flows of the season, enabling him to produce comb honey, extracted honey, or bees, at will. The details of each are supposed to be understood by any old reader of the BEE JOURNAL.

In the fall I select from five to eight of the best brood-frames, with ripe capped honey, on the upper edge and down to the end of each frame, with division-board each side, and blanket or honey-board raised enough for the bees to climb over the tops of the frames; also holes in the combs for runways; then fill with dry leaves, chaff or straw, 3 or 4 inches thick down the sides, to the floor of the hive, and also on the top of the frames, up to the cover, leaving their packing chamber ventilated. I have also used a ventilating chimney with one-inch bore 5 or 6 inches long, with wire screen on top, from the top of the brood-nest to the top of the packing. I do not consider this very essential for cellar packing where the cellar is properly ventilated.

I filled the summer shed with corn stalks a foot deep. I set the hives, packed as above described, one foot apart, 8 inches from the back side, covering the whole with dry leaves between, behind and on the top, to the depth of 2 feet, leaving the entrance holes open to the south. Those, in the summer house, had a vigorous flight on Jan. 1, 17, 24, 28 and Feb. 4, 11, 17 and 18.

The cellar is 15x30 feet, under a brick house, finished for the purpose, and is clean and dry, with a cement bottom, and it contains nothing but bees. It is ventilated with a 7-inch stove pipe, entering the chimney, 5 feet from the floor, with an elbow running down to within 1 foot of the floor, having a draught sufficient to suck up a dry leaf or small paper from its mouth. I never lost any bees in that cellar. I carried out my 37 colonies on Feb. 27, all strong and in good order. Having sold some, I now have 45 colonies, all containing eggs and brood; some living drones at this writing.

Burlington, Iowa, April 9, 1883.

For the American Bee Journal.

Raspberry Honey, Etc.

A. E. FOSTER.

I noticed in the JOURNAL, a few weeks ago, an article asking for information about the quality of honey obtained from raspberry blossom. I believe the article has not been answered yet. I hope some one, who has had a large experience with raspberry honey, will give us "light." I read an item in one of our leading papers, not long since, saying that the honey obtained from raspberries is of an inferior quality, and unfit for the markets.

It looks as though the season had opened in earnest here. To-day, the bees are as busy as can be, bringing in natural pollen. The following is an item about bees in the South laying up stores of honey. Is it true?

Covington, Ky., April 8, 1883.

THE RECKLESS BEE.—An experimenter in Southern agriculture told me the following concerning of Northern bees in the South. He took a colony of the little gratuitous honey-makers down to Florida. The first year they revelled, throve, and stored honey nearly all the unvaried summer time. But the second year, a few of the more reflective bees evidently turned the thing over in their minds thus: "This country has no winter to provide against; what is the use of laying up honey, where the flowers blossom all the year round?" These bees exerted enough influence among their friends to keep a good many bees from laying by any sweet merchandise the second year of their exile.

But the prudential instinct so strong in the little insect prevailed with the majority. They evidently said to themselves: "Perhaps this has been an exceptional year. Next season may bring cold, and snow, and dearth of flower." So there was quite a stock of honey laid by on the second year, in spite of a few strikers. But by the third year the conviction had evidently thoroughly penetrated the bee mind that it was foolish to lay up, in a land of eternal blossom. They made just honey enough to last from day to day, and abandoned themselves to living from hand to mouth as recklessly as does the tropic-born butterfly.—*Washington Gazette.*

[No! There is no truth in it. It is but the idle scribbling of a newspaper correspondent, who thought he would get up a sensation by telling an exciting story.—Ed.]

For the American Bee Journal.

The Langstroth Frame.

J. B. MASON.

On page 144 of Bee Journal for March 14, Mr. H. D. Edwards criticises my article on page 21 of January 10, 1883. He says I do not state the anvantages of the Langstroth frame, and asks why we should adopt it, when the advantages are so few that I have not seen fit to give them. My own idea, formed after long experience with them in my own apiary is, that its advantages are many; in fact, that it contains more real good points than does any other frame; else why is it so fast coming into general use, and that too with practical bee-keepers? Would any one be insane enough to adopt it, if it was not, to say the least, as good as any? I will endeavor now to take up the challenge of Mr. Edwards, and give some of the advantages possessed by the L. frame. First, their now being more largely in use throughout the country than all others combined; by now adopting it, one puts himself on the same track with the great majority, and can easily interchange frames with them, without transferring; as it bids fair to soon become the standard of the country, by using it we are up with the times, and not falling behind. I said it bids fair to become the standard; my reason is, that ere long some standard size will be adopted, and as the Langstroth frame is so largely in use, and so well liked by the unprejudiced, who have given it a fair trial, it will be more easy to adopt it than any other; in fact, it will be utterly impossible to adopt any other as a standard, for all others are now fast giving way to it, and no one will purchase on a falling market.

The reasons why some standard will ere long be adopted, is so patent that I need not take time or space to give them; it is obvious to all that it must come, and when it does, apiculture will take a fresh start. So far as profit is concerned, I care not what style of frame is desired, but I notice that those ordering hives from all sections of New England, at least 95 per cent. of them are for the standard Langstroth, and we may be sure that the climate of New England is pretty severe, to say the least.

My experience is directly opposite to the statement of Mr. E. who says it is generally conceded that bees in a deep frame winter better than in a shallow one. I admit that it once was the case, and that the American frame 14, and even 16 inches deep, was extensively introduced, but they are fast being thrown out, and their places taken by the Langstroth frame. Experience showing that the wintering qualities of a deep frame was a matter of theory, not well backed up in practice.

The fact that the Langstroth frame can be made more cheaply than any other might be an inducement on the start; but practical men do not care for the slight difference, if they get a better article; so that argument does not carry enough weight to be worth answering. It answers itself at once.

The Langstroth frame has the advantage of being the best and most economical in form, so far as the use of sections is concerned. The sections are placed over the brood chamber, close to the bees, where all the heat of the hive is economized, and the size is such that the space is fully economized and all taken up without loss; this of course is a great advantage, and one that recommends itself to all.

To sum up, the only real objection made to the Langstroth frame is, that it is not best for winter in cold climates. Assertions amount to nothing; it is facts we want. How are the facts, and how do they show up? Mr. E. E. Hasty says it is the best for wintering in cold climates, and he makes the statement from results of experiments in his own apiary. Mr. Bingham says it is too deep, if anything, and he uses (and successfully too) in a cold climate, a frame only 6 inches deep. I apprehend that the objections to the Langstroth frame is largely a matter of prejudice. Some one (no matter who) started the idea in opposition to the Langstroth frame that a deeper frame was better, and the American hives met with large sales; but they are fast being superseded by the Langstroth frame. The public begin to learn that theories put forth by interested parties are not always found, in practice, to be true. With deep frames it is difficult to tier up two or three stories, and this is a serious objection.

The extractor plays so important a part in the management of an apiary, that the best reply I can give to any one who says that the Langstroth frame is too shallow to winter well, is, I do not care whether it is too shallow or not; it does well for wintering, and those who have given it a fair trial say it is better than deeper frames.

I have not space now to give the scientific reasons why a shallow hive, of the depth of the Langstroth, should be better for wintering than a deeper one, but may make that the especial subject of another article; in fact, I do not know as we need to inquire the reasons why a thing should be, when we know that it really is.

The evidence in favor of the Langstroth frame is found in the fact that it is so generally used, and that too by practical men; and in the favorable reports that they make in regard to it; and if the unfavorable criticisms that are made against it were less theoretical, more strongly backed up by proof, and come more largely than they do from persons not interested in some other style of frame, I should consider them more worthy of confidence, as advice; and of far more weight in favor of their adoption.

Mechanic Falls, March 26, 1883.

For the American Bee Journal.

A Brief but Kind Reply to Prof. Cook.

E. B. SOUTHWICK.

Mr. Editor.—My article on the one-piece section drew out some remarks from our mutual friend, Prof. Cook, which, in self-justification, *requires* a brief reply from me.

I am not a Christian, because I am too selfish to love my neighbor as myself. I cannot leave father, mother, wife and children to follow Christ; I love them too well. Can the Professor do this? If so, he may be a Christian, while I am not. But, perhaps, it was the other part of the sentence, that he thought differed from Christian teachings; that is, "Do right because it is right." The Professor has made the mistake of confounding Christianity with morality. Christianity is the name of one of the many religions of the day, while right and wrong existed when all these religions had yet to be brought into being. As to the good and moral examples and teachings of Christ, I am as much of an admirer as Prof. Cook. I can say

> "I admire the truth, wherever found.
> Whether on Christian or on heathen ground."

For example: I find the golden rule taught by Christ; I admire it there. I find the same taught by Confucius (that heathen Chinee), 500 years before Christ; I admire it there. I find the Bible directs us to honor our father and mother. I also find the same teachings in the old Egyptian religions that were established before the Bible was thought of; and I admire them in both places. All the difference between the Professor and myself, I think, is that he loves the teachers of these, and I love the teachings themselves.

The Professor says I worship right. Well, I think he will admit then that the God I worship is as good as the best, and that he will cheerfully add justice and truth, forming a trinity, over which we can extend to each other the right-hand of fellowship, and unite with Pope in saying:

> "What conscience dictates to be done,
> Or warns me not to do,
> This, teach me more than hell to shun,
> That, more than heaven pursue."

Mendon, Mich., April 2, 1883.

[The Bee Journal is "devoted exclusively to progressive bee-culture," and discussions of religion, politics, and many other interesting topics are all inappropriate in its columns. Prof. Cook and Dr. Southwick now have had an opportunity to explain their remarks in a discussion of the patent-section controversy,—let this end the present discussion.—Ed.]

For the American Bee Journal.

Those Big Bee Stories.

M. M. BALDRIDGE.

During 1882 the "boys," in various parts of the country, had "lots" of "fun" telling "yarns" about big crops of honey and immense profits by "fooling with bees." Those "boys" in Texas rather got the start of the rest of us and carried off the belt. It is rather early to begin those "yarns" for 1883, but I don't propose to let the Texas "boys" get the start this year, so I will head the list with what one of our "boys" did, as long ago as 1860, to wit:

A TRUE BEE STORY.—On the 1st of February, 1860, the Rev. Hiram Hamilton had 35 colonies of bees near Stockton, California. Twenty-five were in small Langstroth hives, containing about 1,400 cubic inches, and the balance were in larger hives containing about 2,000 cubic inches. At the above date all the bees were moved from Stockton to Santa Clara, California, and they remained there till July 1, just five months—at which date they had increased to 270 colonies. The honey season having closed at Santa Clara, the bees were moved back to the vicinity of Stockton, whence they started, and by Oct. 1, 1860, there were 500 colonies! The 10 colonies in large hives increased to 75 and gave 4,500 lbs. comb honey. The 25 in small hives increased to 425 colonies and gave 16,275 lbs. comb honey! From the 35 original colonies there were at the close of the honey season in 1860, 20,775 lbs. of comb honey, and an increase of 465 swarms, and all of this was secured without purchasing any bees or any feed! They were simply managed skillfully and intelligently, by following the teachings laid down in Mr. Langstroth's excellent book, aided by a magnificent harvest in two very fine locations for honey.

As honey was worth, in California, about $1.00 per pound in 1860, and as colonies of bees were then in good demand, at about $100 each, let us see how this figures:

465 swarms, at $100 each	$46,500
20,775 lbs. of comb honey at $1.00 per lb.	20,775
Total	$67, 275

This, divided by 35, gives a profit (?) of $1,922 per colony! Now divide 20,775 lbs. of honey by 35 and we have an average of 594 lbs. of comb honey per colony! It will be seen that the 10 colonies in large hives gave an average of 6½ swarms and 450 lbs. of comb honey per colony; also, that the 25 colonies in small hives gave an average, per colony, of 16 swarms and 651 lbs. of comb honey!

The above discloses the important fact that the small hives were the most profitable for both swarms and honey, which accords with the experience of the best bee-keepers of today. The fact is also disclosed that it does pay sometimes to move bees from one honey range to another.

Inasmuch as I have headed the foregoing as "A True Bee Story," it may now be well, lest some of the "boys" may have some doubts about it, to cite my authority: Many of the facts enumerated will be found recorded on page 126, first volume of this BEE JOURNAL.

Now "boys" don't let this "yarn" discourage you "one bit," but press on and let us see who will be the first to equal or even surpass, in honey and swarms, the extraordinary success of Mr. Hamilton—for I have my doubts of its having yet been done.

St. Charles, Ill.

For the American Bee Journal.

How to Transfer Bees.

A. RICE.

When it is settled and warm weather, and bees are working finely, take the hive containing the bees to be transferred, to some shady place, or to a work-house away from its own stand. as bees do very little fighting away from home. Immediatley place an empty hive or box in the place of hive taken away, to receive the returning bees, thereby keeping the bees from going into a neighboring hive, that might be standing near. Turn the hives to be transferred, bottom side up; notice carefully the condition of the comb, selecting the side of the hive from which the comb can be most readily removed, after which place some box, nail keg, pail, or anything that will partly or fully cover the hive. With hammer and chisel remove the side of the hive selected. Having given the bees a little smoke, a few moments before removal, after removing the side of the hive, a little more smoke may be given, to drive the bees from the first comb, which may then be removed to the frame; return to the hive and proceed as before, until the last piece of comb is taken from the hive, at which time the bees will have transferred themselves to the box or hive at their original home, or have passed up into the box that you placed on the top of the hive. After the best of the comb (leaving most or all of drone comb out) is transferred, take the hive to its original stand, and shake the bees from the box or boxes, on a sheet in front of the hive. as in the swarming season. Very thin splints, from pine or cedar, such as will split finely, should be in readiness, 30 to 40 to the hive, securing two splints to 6 or 8 frames, with small tacks, that they may be easily removed, and ready to receive the comb. After placing the comb, tack two splints on opposite sides of the frame.

From one to three weeks after the bees have secured the comb to the frames, the splints should be removed; after this work is finished, close the hive, so that very few bees can go into the hive at once, lest the bees may be robbed.

Where several colonies are to be transferred, change the transferring stand to a new place, after transferring each one, to keep away from robber bees, which, at times, are very troublesome.

Do you ask when I did the drumming? I did all the drumming necessary in cutting nails and removing one side of the hive. I can ordinarily transfer a colony while others are drumming the bees.

From taking the hive from the stand and replacing it, as little time as possible should be lost. It is, therefore, very necessary that everything be in readiness, and all done as quickly as possible. It will be observed, that by keeping a box or receptacle on top of the hive, during the transferring, it is nearly or quite impossible to lose the queen, which is of first importance.

Davis Junction, Ill.

For the American Bee Journal.

Selling Honey in My Home Market.

W. C. NUTT.

I have taken quite an interest in the discussions in regard to the merits of the different size of sections. I think we, as producers, should be very careful about changing to a smaller sized section. I have had some experience in furnishing grocerymen with both comb and extracted honey. I have not, as yet, used less than the two-pound section. I was thinking of trying some one-pound boxes this season, but have about concluded to continne with the two-pound sections for the present.

In conversation with a merchant, last fall, I remarked that, perhaps, I would furnish my honey in a little nicer shape the coming year, as I thought that I should use some one-pound sections. He remarked that two-pound boxes were small enough for him to handle. I should expect to sell in my market a two-pound, one-pound, or half-pound section for about the same price per pound.

I use the one and two-pound glass jars for extracted honey; I sell at 15 cents per pound; charging 10 cents extra for jars, and taking them back at the same price. Grocerymen generally sell for me on 10 per cent. commission where cash is paid me after the honey is sold; or even trade, if paid in goods. My two-pound jars seem to have the preference. I am quite sure that the half-pound sections would not pay in my market, and will never be called for unless put on the market.

I examined my bees yesterday; all answered to the roll call, and most of them are apparently in good condition. Some four or five, out of the 66 colonies, show signs of dysentery. I have taken up a considerable number of bees from the floor. I attribute so great a number of dead bees on the floor to the colonies being so strong when put into winter quarters. The cellar is very dry, and is kept dark. For ventilation the outside door is opened occasonally. The winter still hangs on.

Otley, Iowa, March 31, 1883.

☞ The spring meeting of the Cortland Union Bee-Keepers' Association will be held in Cortland, N. Y., on Tuesday, May 8, 1883.

M. C. BEAN, *Sec.*

Convention Notices.

☞ The Mahoning Valley bee-keepers will hold their 13th meeting in the Town Hall, at Berlin Centre, Ohio, on May 5. All bee-keepers, and the public in general, are invited to attend. Do not forget to bring your wives, children, and a well-filled lunch basket. We expect a grand meeting.

L. CARSON, *Pres.*
H. A. SIMON, *Sec. pro tem.*

* * *

☞ The semi-annual meeting of the Western Bee-Keepers' Association will be held at Independence, Jackson County, Mo., on Saturday, April 28, 1883, at 10 a. m. Papers prepared for the occasion by the president, secretary and others will be read, and matters of general interest to bee-keepers discussed. A general attendance of persons interested in bee-culture is requested. The present membership of this Association control 2,000 colonies of bees.

S. W. SALISBURY, *Sec.*
Kansas City, Mo.
J. A. NELSON, *Pres.* Wyandotte, Kas.

* * *

☞ Quite a number of the leading bee-keepers of Missouri and Kansas met at the Court House, in Independence, Mo., December 23, 1882, and organized a bee-keepers' convention, which was named the "Western Bee-Keepers' Association," by electing the following officers for the ensuing year: Jas. A. Nelson, of Wyandotte, Kans., President; L. W. Baldwin, of Independence, Mo., Vice-President; S.W. Salsbury, Kansas City, Mo., Treasurer. The Association passed a resolution to invite all bee-keepers within a convenient distance, to meet with us at our next meeting and lend us their councils. Adjourned, to meet again at Independence, on the last Saturday in April next, at 10 o'clock, a. m. J. D. Meador, P. Baldwin, C. M. Crandall, *Committee.*

* * *

☞ The spring meeting of the Western Michigan Bee-Keepers' Association will be held at Supervisor's Hall, Grand Rapids, April 26, at 10 a. m.

F. S. COVEY, *Sec.*
Coopersville, Mich.

* * *

☞ The Union Bee-Keepers' Association will meet in Grange Hall, Eminence, Ky., on Thursday, April 26, 1883. All bee-keepers, and the public generally, are invited to be present.

G. W. DEMAREE, *Sec.*
Christiansburg, Ky.

* * *

☞ The Iowa Central Bee-Keepers' Association will hold their semi-annual meeting at Winterset, Iowa, on Friday, May 11, 1883. All interested in anything pertaining to bee-culture are invited to attend, and bring anything that will be of interest to the bee fraternity.

J. E. PRYOR, *Sec.*
A. J. ADKISON, *Pres.*

SELECTIONS FROM OUR LETTER BOX

Bees in Fine Condition.

I imagine all bee-keepers wish to know how bees have endured the past almost unparallel winter. My bees are in fine condition, only two having died, and only one weak.

T. F. BINGHAM.
Abronia, Mich., April 6, 1883.

A Bee Hive 60 Years Old.

I put into winter, last fall, 29 colonies of bees; and they are all right yet, but March has been very hard on bees in this part of the country. It has been cold and freezing nearly all the time. On June 14, 1881, I drove a swarm, for a neighbor, out of a box hive that was 60 years old; it had been put in when the box was new; and when I drove the swarm, it was so rotten I could hardly handle it; there were cracks and holes from top to bottom; it stood the hard winter of 1880-81, without any protection, and the bees were very strong in numbers when I drove the swarm. I cut out a lot of sealed comb out the bottom, and nine days after I had taken the first swarm, it cast a second, and on the eleventh day, it cast a third; this hive had never been known to give a swarm in all the 60 years before. Now, if you have an older bee hive than this one, I would like to hear from it. That bee hive would hold about 2 bushels. The bees are alive and doing well yet, and, of course, that colony will be 62 years old this spring.

WM. ASHCOM.
Ligonier, Pa.

Working on Elder and Maple Blossoms.

My bees had the dysentery this winter, but we had a few very nice days here, and they were all out, and it has cured them. I had 12 colonies last fall, bought 2, and I found 4 colonies dead this spring. The bees are working on elder and maple blossoms.

O. PARKER BAKER.
Woodberry, Md., April 4, 1883.

Bees in Florida.

Bees are hard at work bringing in a bountiful harvest of saw palmetto honey. This harvest will last for two or three months yet; then comes an even better flow from the cabbage palmetto and mangroves, as fine honey as was ever extracted. The prospects are that we will have a very good season this year. I know one bee-keeper here who has extracted over 5 barrels of 45 gallons each from only 23 colonies of black bees, already this year. How does that compare with what bees have done so far this season up North? I consider this region the "*Ne plus ultra*" for bee-keepers. We do not discuss "wintering," "dysentery," etc., but "Where can I get barrels to put my honey in." The JOURNAL is a most welcome visitor here.

HARRY G. BURNET.
Myers, Fla., April 2, 1883.

Bees Strong and Healthy.

Bees, in this section, have wintered very well, to this date, considering the long confinement to their hives (from Nov. 25 to March 1), and the severe cold weather, 10° to 12° below zero occasionally. The loss of bees on summer stands to April 1, will not be over one-tenth per cent. On Saturday morning, March 31, there was 4 inches of snow, and it was 12° above zero. I have never before known such cold weather on that date of March. I think many bees will need feeding, to save them till blossoms open. They have carried no flour in, to this date. Most of the colonies are strong in bees.

H. H. BROWN.
Light Street, Pa., April 2, 1883.

Bees in the Woods.

Again my bees are on scaffolds and benches on account of the floods. They seem to be in splendid condition, and are bringing in honey and pollen with a rush. I expect soon to have swarms coming out. I would say a word about bees in the woods in Arkansas. While in the woods, a short while back, I found 4 bee trees within 50 yards of one another, and among them was a swarm of well-marked hybrids. This was 12 or 14 miles from my own apiary. I am the only one that has Italian bees in these parts; it would be surprising to any one that has never been in the bottoms of Arkansas, to see the number of bees in the woods. I have found as high as 9 bee trees in a single day. They are mostly yellow bees, with occasionally some hybrids. I intended to say that one of the 4 that I lately found, had built outside of the hollow 2 feet long and about a half dozen sheets, and the bees seemed to be working in it, and also in a hole by the side of the combs.

W. G. MCLENDON,
Lake Village, Ark., March 27, 1883.

Bees in the Cellar All Right.

I put 21 colonies in the cellar, last fall, and they are all right, so far. I gave them a flight in March, and then carried them back to the cellar again, where they are still, and will remain for some time yet. I have practiced the above plan for three winters, and never lost any in wintering yet. All my losses have been from robbing in the fall.

H. H. HAMMOND.
Pre-emption, Ill., April 9, 1883.

Bee-Keeping in Tennessee.

Scientific bee-culture is not known in this country, but a considerable interest is expressed by a few men here. Mr. Wm. Anderson keeps 150 colonies, David England has 24, Elija England 150, Dr. O. G. Broyles 25, Geo. Cole 30, Crocket Lowry 30, Frank Cope 20, myself 16. Most of them in some kind of movable frame hives, but none of them are manipulated very much. There are a great many others who keep bees in log gums. No more honey was gathered, last season, than was consumed, and mine consumed 120 lbs. of sugar, extra. Our principal source of honey here, for surplus, is poplar from April 25 to May 15; blackberry from April 22 to May 20; June not giving much; then comes sourwood, a great yielder of honey, clear as crystal, during July. Along our mountain caves, linden or basswood comes in June 20, lasting only a week or ten days; on some farms white clover grows profusely, but in my little experience, not much honey has come from it; it blossoms April 30 to Sept. 30. Last year I kept a record of the time of blossoming and and of honey yield, of all the different kinds of plants and trees upon which I saw bees at work. The articles of Messrs. Heddon and Doolittle, in the JOURNAL, are just splendid, but they have collided on the building up or stimulating early breeding question.

J. A. P. FANCHER.

Fancher's Mills, Tenn., Mar. 29, 1883.

Swarming in Tennessee.

The honey crop in this section, last year, was a failure; less honey being produced than any year since I have been in the business, which dates back to the year 1874; and, consequently, the loss of colonies, this winter, has been very heavy. Many have lost half; the average loss, I think, will be about one-third. When the winter set in, I had 185 colonies; this spring I still had 140, some of them not doing well, but the most of them in good condition, working finely, bringing in pollen and some honey from peach bloom, and it looks as though the swarming fever was beginning to run over them. One of my neighbors had a fine swarm on the 3d inst.

J. W. HOWELL.

Kenton, Tenn., April 7, 1883.

Bees All Right So Far.

I placed 80 colonies of bees in the cellar on Dec. 7 (a part with top, and apart with bottom ventilation); but as they have all come through without the loss of a single colony, it does not prove anything on that point. My cellar is 22x30; the fire flue extends to the bottom in the centre, with a 6 inch ventilating tube. The thermometer has ranged from 32° to 35°. The loss of dead bees was about ¾ of a bushel; our coldest day was March 5, when it was 8° below zero. Those who have wintered their bees on the summer stands, without protection, have lost about 50 per cent. of them. My bees have consumed a very small amount of honey, and are in splendid condition.

C. H. FRANCE.

Erie, Pa., April 9, 1883.

Planting for Honey.

I notice in, the BEE JOURNAL, that John H. Martin has made a failure of one of the best honey plants there is (in my opinion), viz.: sweet clover. Having had some experience in sowing, I will give it to the readers of the excellent BEE JOURNAL. In the fall of 1881 I sowed an acre on fresh-plowing, harrowed it over lightly, and awaited the results. In the spring of 1882, not seeing enough young plants to insure a good stand, I sowed the same ground again with the same amount of seed; also, about ¾ of an acre as Mr. M. says, gravelly loam; the result is as good a showing of plants from 6 inches to 2 feet high as any one could desire. It will grow in almost any place, that anything else will grow; even in the fence corners where the soil is never disturbed. I also have had some experience with the Simpson honey plant. Last year I sowed it with catnip, mustard and motherwort, and I have a showing of all of them. The figwort growed 3 or 4 feet high, and after the other bloom had almost entirely failed, the bees were swarming on it until frost stopped them.

J. E. PRYOR.

Arbor Hill, Iowa.

Success in Wintering.

I put into winter quarters, on Nov. 23, 170 colonies of bees (108 in two bee houses, and 62 in the cellar). I took them out of the bee houses on March 1; those in the cellar, on March 9; all in splendid condition except two, which were queenless. Nearly all appear as strong as when put into winter quarters; all have plenty of honey. I use honey-boards, and fill the caps with fine shavings; and give no direct upward ventilation. I have an inch auger hole in the front of the hive, a little above the centre, which is kept covered with perforated tin. I give the same ventilation at the bottom of hive, as I do in summer, and keep the temperature at 42°, as near as possible. I have always had good results when I have wintered in this way; but this winter better than ever. I prefer indoor to outside wintering, and I have tried both.

H. F. PUTNAM.

Galesburg, Ill., April 4, 1883.

Good Work for an Amateur.

We could not do without the BEE JOURNAL; even at three times its cost. We had 2 colonies of black bees in the spring of 1882; increased to 7 by natural swarming and division; have now also 1 colony of Italians. We have lost none this winter (pretty good for an amateur, thanks to the BEE JOURNAL and Cook's Manual), although they were imprisoned for months without a flight, which they enjoyed yesterday and to-day, to the fullest extent. We took 200 pounds of comb honey. We intend to fill 15 hives the coming season. We wintered in a clamp, packed with shavings.

A. C. PARFEY.

Richland Centre, Wis., April 9, 1883.

"Saved the Queen."

As I am one of the many "bee mourners," I am not discouraged yet. I put into winter quarters 18 colonies of Italians, with good stores of honey. Up to date, I have lost seven of that number, and, all but one, left "good estates" of honey. Among the number lost, was my choicest Italian. The queen I purchased from H. A. Burch & Co., in 1881. The 2d of this month I cleaned them up, and in "removing the dead" bees, I found the remains of my prize queen. I carefully removed her to a shelf in a warm room; after a few hours, to my great surprise, I noticed her crawling up on a pile of papers. I at once made ready to save her, by fitting up a nucleus hive, with three frames, in which I found quite a "good showing" of larvæ and young bees; and, to-day, I examined the hive and found a nice supply of eggs.

H. B. HAMMON.

Bristolville, O., April 9, 1883.

Gathering Pollen and Honey.

Our bees are gathering an abundance of pollen and some honey; soft maple, willow and elm are the sources. The condition of our bees are just the reverse of what it was a year ago, at this time. Our 53 colonies all wintered well; with not even a missing queen, so far. The number of weak colonies is small (4 or 5), but all have hatching brood.

S. A. SHUCK.

Bryant, Ill., April 10, 1883.

Wintered Bees on the Summer Stands.

The winter just over, has been a very cold one. I wintered my 30 colonies on the summer stands. About half of them are weak; the rest of them are strong.

V. FISCHER.

Ironton, Wis., April 7, 1883.

Evaportion of Honey.

1. Has the California honey evaporator, mentioned on page 405 of the BEE JORUNAL for 1882, or something similar, been used in the Northwest, and with what success?

2. How long can extracted honey be exposed to air without injury? Should it be bunged up tight to retain its excellence?

3. Can the rank flavor of fall honey be diminished by evaporation, or any other method.

H. W. FUNK.

Bloomington, Ill., April 9, 1883.

[1. Not, that we are aware of.

2. Almost any length of time. It is better to give it air.

3. No.—ED.]

A Lady's Apiary.

I have 39 fine colonies of Italian bees that I manage all by myself. My place covers a half-block. I have my hives all nicely arranged along on one side of the lot, except some few along the grape arbors. I find it a most delightful pastime for a lady; so much pleasanter and healthful than doing nothing, all the time, in the house. The swarming season is just beginning.

MRS. DR. E. H. MASON.

Vincennes, Ind.

Bees Carrying Pollen.

Bees have wintered with but little loss here. In the fall of 1880 I put 100 colonies in the cellar; I lost all, by dysentery, but one, and that came through in a very weak condition. The cause was poor honey and long confinement. In 1881 I built up 9 good colonies, which I wintered without loss. I sold two last spring, leaving 7, which I increased to 25 last season. I obtained about 400 pounds of honey. I lost three, the past winter; they were on the summer stands, under a shed, with straw packed behind and between them, and chaff in top story. They carried in their first pollen on the 6th inst.

P. D. JOHNSON.
Bellmore, Ind., April 11, 1883.

Bees Moved in Winter.

I have examined my bees and find them all in good condition; all have laying queens and brood, and some have drones flying. It will be remembered that I shipped them over 200 miles last fall; then I moved them half a mile on a wagon on Jan. 15, and about March 20, I moved them about 65 miles on a wagon. I sold one and have 17 left, out of 18, in good condition; they are all right, except a few broken combs.

L. G. PURVIS.
Oregon, Mo., April 10, 1883.

Got the Wrong Paper.

I am much pleased with the Weekly BEE JOURNAL, and I think it the best paper published. Wishing to get the Monthly BEE JOURNAL for a friend, I subscribed through a news agent here, and not having your monthly on his list, he sent my dollar to the *American Bee-Keeper* published in Mo. I had to send another dollar to you for the monthly for my friend, for the Mo. paper is utterly useless as a bee paper. Can you not see to it that these subscription agents get your Monthly on their lists as well as the Weekly? Please mention this in the Weekly, and it may save some one else trouble and expense.

R. J. & PHIL OSBURN.
Leclair, Iowa, April 10, 1883.

[Perhaps the best way is to send subscriptions direct to this office. "Subscription agents" often get things mixed, and some of them are perpetual annoyances to publishers by their carelessness in giving addresses, sending the subscriptions to the wrong papers, etc. It is but just to say that there are honorable exceptions. We do not remember a single mistake made by Mr. Doolittle of Borodino, N. Y., or the Subscription News Company of this city. If by chance, a mistake should be made, any honorable publisher would correct it without delay. Our Monthly is on the lists of the principal subscription agents.—ED.]

Almost Discouraged.

Sometime ago, being anxious to see how my bees were (as I had 3 colonies last fall), as soon as I thought it was warm enough, about the middle of the day, I opened the hives to know how the bees were, and found one colony dead, and in the other two I saw no queens; neither am I, at present, able to purchase either queen or colony, and yet, although it is trying, I do not like to say, "class me among the blasted hopes," for I must try again as soon as I am able, which will not be till sometime in the summer. We have had a sharp winter, sometimes 30° below zero; however, delightful spring is again close at hand, and I trust a beautiful summer will follow.

EDWARD MOORE.
Barrie, Ont.

Offensive Personalities.

MR. EDITOR.—I protest against the manner of discussing questions pertaining to bee culture employed by some correspondents. Friendly controversies upon points of interest to bee-keepers are proper and desirable, but when I read such discussions I want arguments instead of personalities. Nothing can be added to the force of an argument by petty flings respecting the religious opinions of an opponent. It cannot make the slightest difference with the weight of an argument whether the author of that argument believes in this, that or the other "ism," or no "ism" at all. Such methods of discussions are il-liberal and unmanly, and serve only to betray the narrowness of the writer and disgust all candid and fair-minded readers. When a writer has exhausted the facts and arguments on his side of a question he ought to stop, and not rob what he has said of its value (if it has any) by descending to personalities. If he has no facts or arguments to offer, let him leave the space he would otherwise occupy to those who have.

WM. H. FRANCIS.
Frankfort, Mich., April 9, 1883.

[True; one of the most disagreeable things an editor has to contend with is the alarming proneness of human nature to run to "offensive personalities. This is the outcome of a too broad an application of the principle of a "free press." Public men are daily misrepresented and their characters defamed without stint, simply because they are public "targets" for the populace to "shoot at." "Your advice is good and timely," let all remember that while it costs nothing to be polite and kind, it adds much to the comfort and unity of the fraternity.—ED.]

Bees Without a Flight 145 Days.

My 65 colonies of bees are removed from the cellar all in good condition; they were in it 136 days in all; they were without a flight for 145 days.

F. A. SNELL.
Milledgeville, Ill., April 12, 1883.

Abnormal Swarming.

I have had quite a number of bees swarm out, and go in with other colonies during the past day or two; what is the cause? They left lots of honey, a nice batch of sealed brood, larvæ and eggs; the combs were nice and clean; in every case, it is about the same. I have captured a few of them, and returned them; one swarm lost its queen, but proceeded immediately to prepare queen cells, and now have a nice lot of them started. The rest proceed as usual, and are contented. If you can give me some light on this subject, it will be much satisfaction.

A. J. NORRIS.
Cedar Falls, Iowa, April 10, 1883.

[The causes of abnormal swarming are many; but it is the weak colonies that leave their hives. In this case, we imagine, it is the fact that the frames are too full of honey, which are colder than partly empty combs. Sometimes they can be kept from swarming out, by giving them combs containing pollen, if they have none. They would not go away, if there were not some things distasteful about the hives or their surroundings.—ED.]

Bees Packed in Dry Sawdust.

I purchased, in the spring of 1882, 3 colonies of Italian bees; increased by dividing to 9, and extracted a little over 500 pounds of honey. We have had a long severe winter, but all have come through in good condition. I packed them in dry sawdust on their summer stands.

WM. E. HARRIS.
South Bay City, Mich., April 10, 1883.

Southern vs. Northern Queens.

In reply to T. S. Johnson, on page 182, I would say that, last spring, I got two queens from Tennessee, one from Kentucky, and one from Michigan. As far as wintering is concerned, I can see no difference; they are all strong and healthy; the hives are as clean and dry as they were last November. I have about a dozen colonies that have soiled their hives some. I find it the same this spring, as usual; the more pollen in the centre of the hive the more dysentery.

MARTIN EMIGH.
Holbrook, Ont., April 11, 1883.

Prospect in California.

On the 28th and 29th of last month, we had 2 inches more of rain, making 8½ inches for the season. Our bees are in fine condition; no swarms up to this time, but I expect them every day. The weather is fine, and there seems nothing in the way for a moderate valley harvest.

A. W. OSBURN.
El Monte, Cal., April 3, 1883.

Best Report on Wintering.

I set my bees out on the 5th inst., Have wintered 241 colonies, without the loss of a colony; all are in fine condition. The hives are mostly full of bees. If any one has a better report on wintering, let them stand up.

H. R. BOARDMAN.
East Townsend, O., April 13, 1883.

* * *

☞ Do not let your numbers of the BEE JOURNAL for 1882 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Stimulating Early Breeding.

I would like to have Mr. Heddon answer the following questions:

1. On page 156, BEE JOURNAL, in regard to stimulating early breeding, please explain the proper arrangement of hives necessary to early breeding?

2. What kind of honey board or cover over the frames is best? and of what goods or material made?

3. I use a board made of ½ inch poplar, leaving ⅜ space between it and the top of the frames. Could I successfully use the feeders you describe, on the top of my hives? My covers are made large enough to come ¾ inch down all round the outside of hive, and deep enough to cover 6 inch surplus box.

4. My experience with sweet clover seed has been no more satisfactory than that of Mr. John H. Martin, page 146, BEE JOURNAL. I sowed some early in spring and some late, about April 10; the first on rye, and the last on freshly plowed ground; the latter came up finely and grew till about Aug. 1, after which time I could see no more of it. Give your advice in regard to growing it.

J. A. P. FANCHER.

Fancher's Mills, Tenn.

ANSWERS.—1. Have none but good, normally prolific queens. Such are, in my apiary, the rule. You must not harbor the exceptions. If you use a frame not deeper than the Langstroth, and not more than 8 of them, and keep off all cloths, placing on a board cover with an air space between the cover and the top bars of the brood-frames—with this condition of things no stimulative manipulations are advisable.

2. Do not confound the words "honey-board" and "cover." A honey-board is a perforated board or rack, which supports the surplus honey receptacles, while being filled. A cover is a solid piece, and, as above stated, I prefer a solid board. We use a ⅝ inch board, and cleated at each end as shown in Fig. 2, letter H, on page 659, of the BEE JOURNAL for 1882. Cover E., as shown in Fig. 1., is about the size, but we have adopted the style of cleating, as shown on shade-board H, Fig. 2. The board is painted all over, and is reversible.

3. Certainly, you can; any of the three feeders I use.

4. I do not feel that my experience with sweet clover, or any other plants, make me the fit person to answer this question. All I can say is, that I should sow melilot clover in early spring; early enough so that the frost will crack the hard shell, and thus insure more perfect germination. I sow on all sorts of land, and the bees act as though I had done well, when the blossoms appear.

Tiering up Sections.

1. Will the bees bridge from the honey rack to the bottoms of the sections in the case?

2. Will the tops of the sections be soiled, when tiered up?

3. Will the covers blow off?

4. Will not the heat melt the honey in so thin a case?

5. Do you wedge the sections to one side of the case? J. J. HURLBERT.

Lyndon, Ill., April 5, 1883.

ANSWERS.—1. There will be scarcely any bridging between the sections and the honey-board, and the sections and each other.

2. There will be no noticable soiling.

3. We have no trouble with covers blowing off. We use a 15-pound stone on each shade-board.

4. The shade-board above referred to, breaks the sun's rays from the cases. All hives should be shaded.

5. I do not; wedge all you please, and yet all sections need scraping before crating.

When and How to Use Sections.

Will Mr. Heddon please answer the following questions:

1. When should sections be put on, with reference to beginning of honey season, and strength of colonies?

2. Do you put on a full case of sections at first?

3. Should a case of sections be put on as soon as a swarm is hived? If not, when?

4. Do you use, and deem essential, any other hive cover than the solid honey-board you use?

W. H. FRANCIS.

Frankfort, Mich.

ANSWERS.—1. A good guide for all locations, is when you see new pieces of comb being built between the top-bars and the cover of the hive. This occurs here, generally, when the white clover begins to yield, but sometimes during the flow from cherry, apple and locust trees.

2. Certainly; we put on a full case of 56 pound sections the first thing; the idea that giving the bees a little more room than they will use at first or a little too early will do harm, is not borne out by experiment.

3. When I have a large prime swarm hived on full sheets of foundation, I usually put on one case at once. There is no danger of brood in the sections if the hive and whole arrangement is properly arranged, and often great advantages accrue from so doing. If the swarm is small, the sections will not be needed for 48 hours, and if the frames are empty, or have only foundation starters, usually not before the sixth to eighth day after hiving. Be careful about adjusting the surplus arrangement when you hive the swarm, unless foundation is used in the frames below.

4. I do not use a solid honey-board. There is, and can be no such thing. It is a contradiction in terms. A honey-board is something that the surplus honey rests on while developing, and is always perforated. I use the same cover over the cases that covers the hive,—a "solid board." Over this I use a 2x3 feet shade-board (see cut, Fig. 2, letter H, on page 659, BEE JOURNAL for 1882), and on this a 15 pound stone.

CORRECTION.—"How and What" department for April 11. In my first answer, on page 195, I wish to be understood as saying "no more than one tier high" in the same super or case, but not on the same hive. I believe in and practice the tiering up method, but only one tier of sections in any one case.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid yonr subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they désire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the adress we already have on our books.

☞Mr. James Heddon announces on another page that he cannot supply any more Hives, etc., in the flat. All interested should notice the advertisement.—*Adv.*

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts each, or $8 per 100.

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1 year, for the Weekly, with **$4**, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with **$6**, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For four subscribers, with **$8**, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with **$10**, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ On the next page may be found the advertisement for a "comb foundation fastener," by D. C. Talbot, of Elroy, Wis., to which attention is invited.—*adv.*

☞ Farmers, buy for your daughters one of the celebrated McTammany Organettes that plays any tune. Price only $8. It will make your home a paradise, and you will never regret it. See illustration in another column.—*adv.*

WANTED—A situation to work with Bees, etc. Address, C. R. Hill, care BEE JOURNAL, Chicago

SEND POSTAL for my 20 page price list of Italian, Cyprian and Holy Land bees, queens, nuclei and apiarian supplies.
H. H. BROWN,
13D3t Light Street, Col Co., Pa.

The Excelsior Smoker Co.'s Cold Blast gets away with all of 'em. You can handle the most vindictive colony without veil or gloves. Send us $1 and try it. By mail, postpaid. Address W. C. R. KEMP, Manager, Orleans, Ind. 14D3t

Motherwort & Catnip Seeds
WANTED.

I wish to buy a quantity of the above seeds, and invite correspondence with any who can supply them. **ALFRED H. NEWMAN,**
923 West Madison St., Chicago.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., April 16, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The nominal price of extracted is 7c. for dark and 9c. for light—here. The supply is abundant and sales are slow.

BEESWAX—None in the market.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—There is no excitement in the honey market, but sales are fair to our regular trade. Offerings are plentiful of extracted and comb honey. Extracted brings 7@9c. on arrival. The sales of comb honey are very slow, although there is a large supply of first-class quality on the market. It brings 12@18c. on arrival.

BEESWAX—Comes in slowly and brings 20@30c per lb., according to quality. CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand is light and it is not now probable that all of the comb honey can be sold before a new crop comes. Prices are very irregular and generally low: 15@16c. for white, and dark unsalable. Extracted, very little trade is being done in it. 7@9c. is about the market.

BEESWAX—35@36c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—Buyers are readily obtained for choice comb or extracted at full figures, but off qualities meet with slow sale.

White comb, 14@17c.; dark to good, 11@13c.; extracted, choice to extra white, 8½@9½c.; dark and candied, 5@7½c.

BEESWAX—We quote 30@33c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Very quiet; dull. Comb at 14@16c.—some inferior sold at 10c.: strained at 6½@7c., extracted at 7½@8½c., lots in small packages more.

BEESWAX—Scarce and wanted at 35c.

W. T. ANDERSON & Co., 117 N. Main Street.

CLEVELAND.

HONEY—Is a little lower, and at the lower price it has moved off a little better of late. 1-lb. sections of best white sold at 18½@19c.; second grades, 1-lb., 17c.; 2-lb. sections a little slow at 17@18c. Extracted very dull at 9@11c.

BEESWAX—None in market.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—Our supply is gone; we have none to quote.

CROCKER & BLAKE, 57 Chatham Street.

Vandervort Foundation Mill.
6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

ALFRED H. NEWMAN,
923 West Madison-st.,
CHICAGO, - - ILLINOIS.

IF YOU WISH TO PURCHASE

The **BEST BEE HIVE** in the world, send for descriptive circular to
16A1t **C. H. FRANCE**, ERIE, PA.

REST not, life is sweeping by, go and dare before you die, something mighty and sublime, leave behind to conquer time." $66 a week in your own town. $5 outfit free. No risk. Everything new. Capital not required. We will furnish you everything. Many are making fortunes. Ladies make as much as men, and boys and girls make great pay. Reader, if you want business at which you can make great pay all the time, write for particulars to H. HALLETT & Co Portland, Maine. 8A1y

IMPORTANT TO BEE-KEEPERS.

Our new circular and price list of queens for 1883 contains 32 pages and is illustrated to show our new way of rearing-queens. Send your address on a postal card for it. Our new book (200 pages) on

QUEEN REARING

is now ready. Bound in cloth and sent by mail for $1.00. Those who desire may remit on receipt of book. **HENRY ALLEY.**
13Atf WENHAM, MASS.

Headquarters in the West

Having fitted up our shop with new machinery, we are prepared to furnish all kinds of

APIARIAN SUPPLIES,

Simplicity, Chaff, Langstroth and other hives.

BEES AND QUEENS.

One-Piece Sections, $5.00 per 1000.

Dunham Foundation at bottom prices.

Silver Hull Buckwheat, $1.50 per Bushel.

Job Printing done on short notice.

LARGE, NEW LIST, FREE.

BRIGHT BROS.,
A10, 14, 16 Mazeppa, Wabasha Co., Minn.

BE SURE

To send a postal card for our Illustrated Catalogue of Apiarian Supplies before purchasing elsewhere. It contains Illustrations and descriptions of everything new and valuable needed in an apiay, at the lowest prices. Italian Queens and Bees. Parties intending to purchase bees in lots of 10 Colonies or more are invited to correspond.
J. C. SAYLES,
51D15tB5t Hartford, Wis.

1883. **1883.**
YOU GET VALUE RECEIVED!

QUEENS, BEES AND SUPPLIES

If you want **EARLY QUEENS** from the best improved **genuine** stock for business; or if you want Imported Italian Queens or bees, in full colonies or nuclei, with tested or untested queens; if you want Dunham or Vandervort comb foundation, made from **pure** beeswax; or if you want hives or apiarian supplies of any kind, send for my new catalogue. It tells you about introducing queens, new "Races of Bees," etc. Cash paid for clean beeswax. Address,
J. P. H. BROWN,
5BD15t Augusta, Georgia.

THE NEW IMPROVED
STEAM POWER
Comb Foundation Factory
CHAS. OLM, Proprietor,
FOND DU LAC, WISCONSIN.

Best work and pure beeswax is warranted.
Send for Sample and Circular. 8Dtf

W. Z. HUTCHINSON,
Rogersville, Genesee County, Mich.,

has made arrangements to receive Italian queens from the South, early in the season. The queens will be bred from imported mothers, reared by a thoroughly competent and reliable breeder, and, upon their arrival, they will be introduced to nuclei, until needed in filling orders. These queens will be shipped as soon as it is warm enough in this latitude, probably about May 1st, and they will be used in filling all orders for untested queens until about June 15th, when queens reared in the home apiary will be ready to ship. Before June 1st, untested queens will be $1.50 each: during June, single queen $1.25, or six for $6.00; after July 1st, single queen $1.00, six for $5.50, twelve for $10.00. Tested queens (reared last season in the home apiary), before June 1st, $3.00 each; during June, $2.50 each; after July 1st, $2.00 each. Safe arrival guaranteed. Make money orders payable at Flint, Mich. 14Dtf

OLDEST BEE PAPER IN AMERICA
THE AMERICAN BEE JOURNAL
ESTABLISHED IN 1861

VOL. XIX. CHICAGO, ILL., APRIL 25, 1883. No. 17.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

"Paraffine Comb" and "Glucose."

It is trite but *true*, that while "Falsehood rides on horseback, truth travels very slowly on foot." We are forcibly reminded of this upon looking over the last annual volume of Appleton's Cyclopædia, published by D. Appleton & Co., of New York. It is very evident that the compiler of that volume has been imposed upon by the notorious Professor Wiley, who, in June, 1881, originated the preposterous falsehood about "comb honey" being sold in New York, the combs of which were "made of paraffine, and filled with pure glucose, by appropriate machinery," etc.

On page 51, of the Cyclopædia mentioned, while enumerating the uses to which glucose had been put, we find the following:

> "Glucose is used chiefly for the manufacture of table syrups and candies, for brewing, as food for bees, and for artificial honey. . . . . Glucose is very extensively fed to bees, which eat it with great avidity, and store it away unchanged as honey. It is also put up directly in trade as honey—with which bees have had nothing to do—being put up by means of appropriate machinery into artificial combs made of paraffine."

When this pernicious falsehood first appeared, it was extensively copied by many papers all over this country, and quoted by men of learning and influence, and we endeavored to counteract it, by showing its falsity and absurdity, and calling upon its author for proof. Being hard pressed, this scientific *joker* admitted the absurdity and falsity of his "story," but consoled himself with the idea, that people in general were too thick-headed to see the "joke," as he stated in the Indiana *Farmer* last June, which was copied into the BEE JOURNAL of June 14, 1882, and commented upon.

Mr. Wiley's own version of the origin of the story [lie], and our remarks, are as follows:

> Perhaps it may be well enough to give here the origin of the "paraffine comb" story which has appeared, I believe, in almost every publication in the country. The original appeared in the *Popular Science Monthly* for June, 1881, in an article entitled "Glucose and Grape Sugar," which I contributed to that number, and on page 254, occur the following words: "Bees eat glucose with the greatest avidity; or rather, they act as funnels by which the glucose is poured into the comb. For it is quite true that the honey made by bees which have free access to glucose differs scarcely at all from the glucose itself. But the quantity of honey which a bee will store away when fed on glucose, is truly wonderful. This gluttony, however, rapidly undermines the apiarian constitution, and the bee rarely lives to enjoy the fruits of its apparent good fortune. In commercial honey, which is entirely free from bee mediation, the comb is made of paraffine, and filled with pure glucose by appropriate machinery.
>
> This last clause which, when written, was meant for a *scientific pleasantry*, came near throwing the whole bee world into epilepsy. It appears that persons who devote themselves to BEE JOURNALS, undergo a certain cerebral inspiration which renders them incapable of seeing a *joke*. The only point which they can appreciate seems to be the sting of a bee.

The rejoinder reminds us of an anecdote we heard many years ago, located in a rural district in Indiana. A well-to-do-farmer lost a very fine filly from his pasture-lot, and after several days' search found it snugly tied in the log barn of a distant neighbor of doubtful repute. The neighbor was indicted, tried, and found guilty of larceny; when the Judge asked what he had to say, why sentence should not be passed, he put in a plea that the animal was only taken for a joke. The Judge inquired how far his barn was from the pasture lot, to which he replied, "about 5 miles." "Well," said the Judge, "that is carrying a joke too far; hard labor in the penitentiary for seven years." The writer above says he contributed to the *Popular Science Monthly* his "paraffine comb" story [lie] about a year ago, "which has appeared in almost every publication in the country." The latter part of the article, however, was only meant for a *scientific pleasantry*.

Do scientific men indulge in pleasantries which will cast a gloom over thousands of honest producers throughout the country, and depreciate the value of their product by creating a prejudice against it? For nearly a year this *scientific joker* saw his fabrication published in nearly all the papers in the country, and reiterated from across the ocean, and yet he lacked the manhood to affirm it a joke until "the BEE JOURNAL man" counteracted its influence by showing the falsity and absurdity of the article. Whether it be true, as has been often intimated, that the story was instigated by parties interested in the glucose traffic, in retaliation for the hostility of the bee men to their frauds, we cannot affirm; but we do believe it originated with no honest intention.

Now we would respectfully call upon Messrs. Appleton & Co., to make the correction in the next annual volume of their Cyclopædia, not only in justice to themselves, but for the sake of truth and right, and thereby aid, as far as possible, to counteract the injury they have already done the honey producers of America, by giving publicity to the fabrication of the self-admitted inventor of the pernicious falsehood; which he says he intended as a "joke" or "scientific pleasantry," but which has been taken in earnest, and copied and quoted as sober facts throughout the world.

When papers like the *Popular Science Monthly*, and books like "Appleton's Cyclopædia" are imposed upon, and unwittingly publish to the world as a fact, what this man, Wiley, well knew was an impossibility, and only the "silly imagination" of an unbalanced mind—is it to be wondered at, that ordinary papers and the common people should be "incapable of seeing the joke?" Evidently Wiley intended the story to make him famous, and cause a sensation! Has he not succeeded, in making fame? Surely; but it is, and should be, written—*infamous!* His "scientific pleasantries" are but falsehoods, both unscientific and *unpleasant!* While his "jokes" bear the closest affinity to the senseless jests of odiocy, and the foolishness of a maniac.

Postage and Money Orders.

According to the new Postal Laws, important changes are to be made during the next few months. In order to save a multitude of questions we will give the main features of the new regulations, which should be studied by all interested.

On and after Oct. 1. 1883, letter postage will be 2 cents for each half ounce or fractional part thereof, between all points in the United States. The rate will then be the same on drop letters and all others. No changes are made in rates on other classes of matter. On and after the 1st of July, 1883, you can obtain at any money order office, postal orders in sums of $5 and under, by paping a fee of *three cents*. These postal notes will be made payable to bearer without corresponding advices. They will be payable at any money order office within 3 months of the date of issue. After the lapse of that time the holder can obtain the par value, only by applying to the Postoffice Department at Washington. On and after the 1st of July, 1883, you can obtain a postal money order for as large a sum as $100. The present limit is $50. The fees on and after that date will be as follows:

Not exceeding $10	8 cents
From $10 to $15	10 cents
From $15 to $30	15 cents
From $30 to $40	20 cents
From $40 to $50	25 cents
From $50 to $60	30 cents
From $60 to $70	35 cents
From $70 to $80	40 cents
From $80 to $100	45 cents

The postal notes will be found more convenient in one respect than the fractional paper currency was. since they can be obtained for any number of cents under $5. There will also be less liability to loss by theft than there was when fractional notes were used for transmission through the mails, especially if the department uses judgment in prescribing the size and form of the notes, and in selecting the paper on which they are to be printed. After the 1st of October the cost of sending any sum under $5, by postal note, will be 5 cents—2 cents postage and 3-cent fee.

This will be a great advantage to our subscribers, making a cheap and safe method of sending money in letters for subscription or advertising.

Transferring Bees.—Mr. G. B. Jones, Brantford, Ont., thus describes his method of transferring bees. The special feature of his hive is the arrangement of entrances, which are three in number—one in front, and one at each side, the former being twice as long as the latter. The front one is, of course, essential. The advantages of the others are by him described as follows:

In aid of transferring from an objectionable hive, proceed thus: Place the old hive 3 to 6 inches from the new, with its entrance opposite either side-entrance of the new; construct a closed passage between the two hives; place a piece of D. A. Jones' perforated queen metal over the inner side of the same side-entrance; close the other, leaving the front open; put in the necessary number of combs or foundation for the new hive. Now, drum the bees up from the old hive until the queen leaves it; shake them into the new hive; and, covering both hives, leave them for 21 days. The queen will be unable to get back to the old hive, and will settle down on the new combs, and the bees with her, excepting those which go back to care for the brood. As the brood hatches, it will come forward, and in 21 days all will be out. When honey is scarce, they will take it forward also. Now, remove the old hive, close the side entrance of the new; shake any bees remaining in the old hive in front of the new; and melt the old combs into wax, after extracting what honey they contained. This method has been practised by me with success one summer, and on as late as Sept. 20. Colonies may be doubled much the same way; for having the one common entrance they will soon unite, if scented alike artificially.

☞ Reports from all the States are assuring. The past winter, though severe, has not been a disastrous one. But few losses are reported, and the prospect for a full honey crop is excellent. There is a good sward of clover, having been protected by the liberal amount of snow, and, with a fair amount of propitious weather, there need be no fears of having a poor honey harvest.

☞ Mr. W. H. Furman, for 28 years a resident of Cedar Rapids, Iowa, and during that time one of the most enterprising bee-keepers of Iowa, has taken up his residence in Dakota.

The Bacteria.

We have received a pamphlet of 65 pages, on this subject, by T. J. Burrill, Professor of Botany and Horticulture in the Illinois University. It is a very interesting treatise on the nature, organization, effects and classification of Bacteria. The following extracts from it will give a good idea of the subject matter:

"It is the object of this paper to present, in language freed as far as possible from technical terms, the principal and most interesting facts now known about these silent working denizens of the earth, the air, and the water."

"We swallow them with our food, and at least some kinds sometimes retain their activity in the somach and intestinal tube. It now seems certain that the latter is always inhabited by special kinds which have to do with the activities there in operation. In health the blood is usually quite free from them, but in certain diseases this too, as it rapidly courses through the arteries and veins, sweeps along in the current myriads of the minute but living and developing, ever active things, inappropriately called "germs."

"There is now. in certain cases, just as good evidence that bacteria cause diseases as there is that hawks destroy chickens, and the evidence is as inductively rigid in the one case as in the other."

We can supply it to any who may desire it at 50 cents.

Virginia for Bee Culture.

It will be remembered that sometime since Mr. E. C. Jordan, at the White Sulphur Springs, Va., advised bee-keepers to try that locality before going further South or West. A correspondent wrote him for particulars, and the reply was sent us for publication, and we have made the following digest of the questions and answers:

Improved farms here are worth from $15 to $100 per acre; the main crops produced are wheat, corn, oats, hay, potatoes, fruits, vegetables, etc.; the soil is slate, and there are iron mines here; the Shenandoah Valley is not subject to droughts, and we have no malaria; all kinds of small fruits do first rate here; thousands of cattle, hogs and chickens are raised here, and are shipped to Baltimore, Washington Philadelphia and New York; the best of butter, cream and cheese are produced here; bees obtain surplus here from March to November, and our honey is marketed in Winchester, Washington, Baltimore, Philadelphia and *at home*, and sells at from 20 to 25 cents per pound.

Advertisements intended for the Bee Journal must reach this office by Saturday of the previous week.

CORRESPONDENCE

Rural New Yorker.

The Influence of Food.

PROF. A. J. COOK.

We often hear farmers remark that food has more to do with fine stock than does pedigree. While we do not think this is true, yet we must confess that good feeding is no mean factor in successful stock breeding. Long and careful breeding, indexed by a valuable pedigree, insures susceptibility, which makes great results possible, but only with proper care. A 50-horse power engine possesses great potency, but on one-fourth rations of fuel it would accomplish less than a 10-horse power. Yet it would be foolish to argue that fuel was more important than the style of the engine.

Among higher animals we have no evidence that food produces rapid structural changes. Food, selection and time will change the form, carcass, and even the habits, but only after long years of modification. Among lower animals we have some startling facts that show most graphically that food is sometimes a most powerful agent, able to effect a radical structural change in a very brief time. We all know that, in the main, the animal functions are very similar, even though studied in animals which are structually wide apart. The now generally accepted philosophy that all animals have a common ancestry should lead us to give wise consideration to the peculiarities of lower animals, even in our treatment of the higher forms. If, then, we can show that food is potent to substantially modify the entire organism and life habits of bees, it should serve to exalt our estimate of its value and influence as affecting the higher animals. The same egg may, yea will, produce either a worker bee or a queen, the character of the progeny depending solely upon the character and quantity of the food consumed. If the food is rich and abundant the result is a queen bee. If it is less nourishing and stinted in quantity, a worker bee is the result. Even after the egg hatches, the young larva may be fed for three days in the meager way, then fed the richer food in ample supply, and a queen will result, though not so valuable a one as though fed the rich royal pablulum in generous quantities from the first.

Now, let us see what the changes are that are wrought by these improved good rations. The queen is longer and slimmer than the worker bees, and her ovaries are feebly developed, capable of growing daily from 2,000 to 3,000 eggs. On the other hand, there is a more feeble development of such organs as are used in procuring food and performing the various operations of the hive. Thus the queen has no pollen baskets, her jaws, as compared with those of the workers, are weak, her tongue short, and her glandular system and stomach are more fully developed. Thus a simple modification of the food regimen produces sterility in the workers, which are only sterile females, while the organs that are more intimately connected with nutrition are more strongly developed. It would seem that the food is too slight to stimulate the growth of the ovaries, which is appropriated in a more decided development of the special organs which minister to nutrition. If food can do all this with bees, it certainly may be regarded as a very important element in the development and care of our higher animals.

Lansing, Mich.

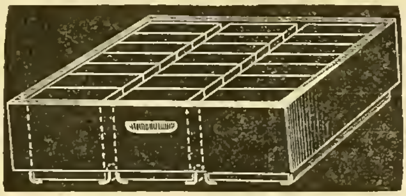
For the American Bee Journal.

Racks for Surplus Honey.

J. W. PORTER.

I notice some attempts are still being made to get over the difficulty I successfully accomplished years ago, and my plan was illustrated on page 240 of the BEE JOURNAL for 1878. Mr. Whitford's plan on page 56, I see is referred to by Mr. Heddon on page 95.

The purpose was to have a case that would be bee tight; one that could be readily tiered up (a point of great value here), and one that would hold the sections lengthwise of the hive (no other would do for me), and come right down on to the brood combs, with only bee space between sections and brood; one, too, that would admit of long separators of wood. All of these points are attained, and the continued use of this rack, for years, have been so satisfactory, that I think a real service will be done to republish the cut of it. It was freely contributed to the fraternity. I had experimented much, and have seen nearly all, including Mr. Heddon's latest; which, while it has some valuable points, is open to serious objections. Mr. Whitford's mistake is in making his T supports solid. Made of X or XX tin, and so bent as to have them thus ∩, standing ⅝ inch high, all the strength needed is obtained, and the space permits them to rest on a nail inserted at the apex.



Rack for Surplus Honey.

Mr. Heddon asks about bee space. The tin angles are flush with the bottom of the case, and the case rests on strips ⅞ wide, by ⅜ thick, placed one at each end, transversely across the brood frames, tight to the ends of the hive. Now, with this arrangement it matters not if the bees build wax bridges in bee space, prying between the case and transverse stick, separates all without displacing or lifting a comb below. They can be made to fit any hive. At one time I considered it a good advantage to use the deep, wide frame, with hanging separators, and with some bees. Much more can be done with them than with any case. Because of their use in Langstroth frames, I adopted the size of 4¼x5⅔x2 sections; six just fill the frame.

My cases are made to take 18 of them. The separators are notched to let down in the middle tins to bee depth. Five separators only to 18 sections, and each one movable, and of wood or tin may be used. I much prefer wood.

The T should be stamped not hammered. That is done by slitting an oak or hard wood block, strips of tin, 1⅞ inches wide, are cut and bent slightly into the slot. Then reversed and forced by a lever into the next slot, and they are finished in the shape of this U. An iron or steel square blade of equal thickness is used under the lever. Tinsmiths can form them, but false bends damage the strength greatly.

Charlottesville, Va., Feb., 17, 1883.

Translated from Bienenvater by A. R. Kohnke.

Wax—Tests for Proving its Purity.

PROF. P. F. RESCH, S. J.

What is wax? To the uninitiated this may seem a very superfluous question; but the fact that there are a number of natural products going by that name, demands accurate determination of the kind. For instance, in some churches the ritual directions are to use wax candles at certain ceremonies; the ordinance also specifies of what kind of wax such candles must be made, viz.: "beeswax;" but that is as far as the ordinance specifies. Hence, it is customary to use the product of the native bee, in the different countries where such candles are used; in Europe, it is the common or German bee, or the Italian; in Syria, the Syrian; in Cyprus, the Cyprian; in the East Indies, *Apis dorsata, florea, Indica;* in South America, the species Gothuir, *Melipona*, which furnish the wax. It appears that the wax from all the different species of bees possesses the same chemical and physical properties.

For the sake of convenience it has been found necessary to classify wax under the following heads: Beeswax, vegetable wax, and animal wax. On comparing the elementary constituents of the different kinds, we find them to be composed of carbon (C), hydrogen (H), and oxygen (O) in the following average proportions:

Beeswax....C, 81.70, H, 13.26, O, 5.04
Veg. wax...C, 71.61, H, 12.38, O, 16.01
Min. wax...C, 85,70, H, 14.30, O, 00.00

As beeswax, to a great extent, is adulterated, the discription of a few handy tests may not come amiss.

Pure beeswax has the following properties: At 30° C, it may be kneaded; between 69° and 70° C, it melts. Its specific gravity is between 0.960, 0.969. A higher or lower specific gravity indicate adulterations with foreign substances.

Pure wax, when melted, appears as a clear, slightly yellow liquid, and, if put into hot water, should not dissolve the same, nor leave any sediment. This is one of the most important tests, and in order to better observe changes of transparency, or a sediment, should be made in a test tube. But it does not follow that the wax is pure, if no discolored water or sediment is noticed; hence, we have to apply other tests.

Take a piece of caustic lime and slack it in about four times its bulk of water. After it has well slacked, and been well stirred, it must be filtered through filter paper, using a glass funnel for this purpose. Of the now clear lime water obtained, add some to the still molten wax, stirring it well all the time. If now the water becomes whitish or cloudy, or even a sediment is noticed, it indicates adulteration by stearic acid, which combines with the lime, forming an insoluble precipitate of stearate of lime.

A still more delicate test may be performed by dissolving some of the wax in ten times its weight of chloroform, and then adding some of the clear lime solution.

The above are the principal tests. To detect other impurities, which are added to increase the weight and bulk of the wax, but do not combine with it, will not be difficult, and will show themselves by melting the wax. The following substances have been found to be added, to increase the weight: Water, starch, phosphate of lime, sulphate of lime, carbonate of lime, ochre and sawdust.

To adulterate wax the following ingredients are used: Stearine, paraffine, tallow, ceresine (or ozokerit), galipot, and vegetable wax.

To detect water, it is necessary to submit quite a large quantity of the wax to the test of melting, and keeping it at the boiling point, for sometime, to evaporate the water, without burning the wax, of course. Any decrease in weight indicates an admixture of water, the amount of which may be determined by the scales. In the same manner, viz.: by melting, other impurities may be detected, as most, or all of them, will be found as a sediment, either in the wax on the side next to the water, or will even sink entirely to the bottom.

Tallow causes wax to feel fatty or greasy to the touch. One cannot write on such wax with a piece of chalk, while on pure wax it can be done. A little piece of such adulterated wax thrown on a red hot stove, or other iron or burning coals, will emit a heavy, very disagreeably-smelling smoke.

For paraffine, the test is as follows: Take a small piece of the wax, put it into a watch glass, and pour sulphuric acid on. Pure beeswax will be charred, and the paraffine remain without being changed. The same test is applicable with reference to any kind of mineral wax, as ozokerit or ceresine.

If pure wax is put into either, about half of it will be dissolved, whilst vegetable and mineral wax is entirely soluble in it; with this difference, that the latter, in part, forms jelly flakes. If wax, on being dissolved in either, loses more than half, it contains either vegetable or mineral wax.

Youngstown, O.

For the American Bee Journal.

Spring Management of Bees.

FAYETTE LEE.

I am located 60 miles west of St. Paul, on the Manitoba railroad. I have been in the bee business six years; the average yield, per colony, spring count, is 92 pounds. Our surplus honey is from basswood and golden rod. I do not claim that the way I manage bees is perfect, but by putting our experiences together we can learn something. When I first began keeping bees, I borrowed all the bee papers I could find, besides subscribing for three others.

I use a two-story hive with a loose bottom-board. I believe they are the best. I use the American hive, nine frames in each story. Early in April, I put the bees on their summer stands, and raised up every hive and cleaned the dead bees from the bottom board, and closed the entrances half an inch. The next thing is to know if they have honey. I take off the cover and roll back the quilt; if they have capped honey in sight, I close the hive and mark it: "honey for ten days." All hives not having honey in sight, I mark, "short of honey." Beginners should not open a hive when bees need feeding, and tear out all of the frames to see the queen, or ascertain if they have brood. The way I handle weak colonies is: I only take out one frame of comb, just as close to the brood as possible, and in its place I put a frame of honey from some heavy hive, or fill a comb with honey, or syrup made from sugar.

Careless handling is the cause of weak colonies swarming out in early spring; you disturb the bees and queen by handling the brood combs too much; it causes robbing, and out they go, to be killed by trying to enter other hives; tuck them up, warm, till there is plenty of honey and pollen coming in, and then it will do no harm to handle the combs, or look for the queen. I get all the brood possible by the time that fruit and dandelions bloom; by spreading the brood in strong colonies, and taking out now and then a frame of brood, to build up the weak ones. The best moth-trap is a few young turkeys or a pair of ducks; try them and see. As the bees get strong, give them wider entances; it will not pay to unite weak colonies in early spring; do not think, because they are weak, that the queen is poor; give them brood and bees, and you will see plenty of eggs in a short time.

Early in May I want every hive full of brood, in order to get a large yield of honey from every hive, and a good increase. I want nine frames of brood in every hive by May 25; and the way to get it done is by spreading the brood combs. I take the outside comb and put it in the centre of the brood-nest; I do this every seven days, until I get nine full of brood. I handle the brood very carefully. In April I have all hives full of brood. If honey is coming in, I get some swarms in May and June, but more in July. I put on the top-story as early as June 1. I have surplus combs in the top story, from the last season, and what I lack is filled by frames of foundation. The increase that gives me the most honey is one swarm from two. I put one frame of brood in the upper story, when I put it on; this causes the bees to go up there to work. I save the queen-cells from the first colony that gives a swarm. In seven days after, I take out all but one frame, and make as many nuclei as I have cells, and take two frames of brood and put with them from other hives. I do this every six days until they are full of brood; as fast as they swarm I return them to their own hive, and take three frames of brood from them, give them a new location, put the three frames of brood in an empty hive, and put it on the old stand. In this way I keep all strong colonies by adding brood. I do not like too much swarming in July; it spoils the honey harvest. By returning them, giving them a new location, and removing some brood, I keep them just where they will give us a large yield of honey. June swarms always pay me best. A swarm will fill its hive with comb in two weeks in June.

Cokato, Minn.

For the American Bee Journal.

Are Half-Pound Sections Desirable?

E. N. WOOD.

As much has been said about the size of sections, I have taken some pains to find out how our bee-keeping friends felt about the matter, in this section of the country, and I have not heard from one that favors the half-pound section, from parties that have a home market for all their product. We all ought to strive to hold to the present sizes of boxes and hives, as changes mean great expense and trouble. It seems to me that a general change in the size of honey boxes will soon bring new styles of hives that will be supposed to be better adapted to the use of the new box, and these new styles will catch many who are young in the pursuit, and as first impressions are strong, many of them would never change; many more sizes would be added to our now standard sizes of hives, frames and boxes. There are four general or standard sizes of boxes, 4¼x4¼, 5¼x5¼, 5½x5½, 5¼x6¼. The few sizes of boxes now in use has enabled the manufacturers to bring the prices down to the present very low rates, as they make large quantities of each size at a time, whereas, if the half-pound section comes into general use, I think the prices of them all would be somewhat higher than at present; for get the craze (if I may so call it) once started and it will sweep over the country, and nearly every bee-keeper, no matter what the size his hive may be, will think he must come to the half-pound section as near as possible, and there would be as many sizes of half-pound boxes as there are different sizes of hives at present, and I fear more, as some would reduce their boxes in one way and some in another.

I think, perhaps, for a season or so, the half-pound sections may take well in the market, it being new, and somewhat of a novelty, but it will become a drug upon the market and be driven out of use, to the sorrow of those that have made expensive changes.

Again, I think one-pound is as small a quantity as most people want to buy. It is about the right size to put upon a plate without cutting in two, and if a pound or more of honey is to be bought they would certainly pass by the half-pound lots (for they have the appearance of too much tare) to the 1, 1½ and 2-pound boxes, and, again, I am afraid we cannot get near as large a yield per hive with these small boxes. Let us hear something of this from those that have used them.

North Lansing, Mich.

For the American Bee Journal.

Queens Reared in the South.

THOS. C. DAVIES.

On page 182 of the JOURNAL for April 4, Mr. T. S. Johnson, of Bogart, O., asks Mr. G. M. Doolittle and "any others who have had experience with Southern queens, if he thinks bees from a queen reared in the South are as hardy and well able to stand the long, cold winters of the North, as those from a queen reared here?" Being one of the "others" who have had some experience with Southern queens, I would like to give the following details:

In April of last year I received a dollar-queen from a Southern breeder, and in a few weeks after, a selected tested queen from the same person. I also received a selected tested queen, and a Syrian queen from a New York breeder. From those two selected queens, several fine queens were reared during July and August, and when preparing my bees for the winter, my queens were as follows: Two from the South, two from the State of New York, and 24 reared at home. Several of those were reared the season before the last, and one of them was reared in July, 1879. She had been such an excellent queen, that I had not courage enough to kill her last fall, and she was allowed to live as long as she could. About three weeks ago she died, I suppose of old age.

Twenty of those, including the two from the South, and the selected one from New York, were wintered on their summer stands, well packed in chaff. On April 3, they were all examined, and the two from the South had their hives well stocked with bees and brood, and fully equal to the one from New York. In fact, those 20 colonies, except one, have wintered admirably, and they are now so equal that I cannot tell which of them is the best.

Of the 8 in the cellar, 6 came through well, but the other two are rather weak, and queenless. One of the queens died last week, and the other, three weeks ago. I united these two, and have sent to the Southern breeder, four days ago, for a queen to give them.

I do not know what has been the experience of others with Southern queens, except that of Mr. Doolittle's with his Texan queen, but I must say that I am well pleased with them so far. I believe with Mr. Doolittle, that "there is a difference in bees about wintering," but can hardly believe, at present, that it is due to the part of the country where they are reared. I sincerely hope that the bee-masters, by "studying and experimenting," will succeed in getting more light on this inequality of different colonies regarding wintering, before another cold winter comes.

Pittsburgh, Pa., April 11, 1883.

For the American Bee Journal.

Bee-Keeping in Florida.

C. H. LAKE.

As many bee-keepers throughout the country are turning their attention to this State, and being in communication with several prominent bee-keepers already located there, through whom I have gathered the information herein contained. I give it, thinking it might be of service to those about to locate there. For the past three years I have been thinking of removing there permanently, owing to the fact I am of a consumptive family, and suffer extremely with lung difficulty, especially in cold winters in this latitude.

There is a belt of country along the east coast, rightly termed the "Bee Belt." Ten years ago bee-keeping was an unknown industry there, and scarcely a dozen colonies could be found among the few families who then inhabited that portion of Florida. This "belt" commences about opposite Port Orange, extending South as far as Oak Hill, a distance of 125 miles, or thereabout.

Thousands upon thousands of acres of marsh are there covered with the black mangrove, the best and greatest honey producing plant known in Florida. Within this radius the black mangrove predominates, while above the head of Indian river, the red mangrove grows almost exclusively, which, I believe, is not a honey-producing shrub.

This "belt" offers superior inducements to bee-keepers, and when the fact becomes known, bee men will not be backward in availing themselves of the opportunity, by moving in and locating at favorable points. From recent letters from Mr. O. Olson, of New Smyrna, who is, without doubt, the most experienced and successful apiarist in Florida, making bee-keeping his exclusive business, he informs me that it is "impossible to overstock the country." Mr. Olson makes the study of honey-producing flowers a portion of his business, and from "careful microscopic examination of the flowers of the black mangrove," he finds they contain "one-fourth of a drop of honey." When it is taken into consideration that this shrub bears thousands upon thousands of blossoms each season, one can get some idea as to its honey-producing qualities. It is asserted that 90 per cent. of the surplus honey gathered during the season (which lasts usually about ten weeks), is from black mangrove. While there are a great variety of the other honey-producing flowers, blooming at different periods throughout the year, among which can be enumerated the "saw and cabbage palmetto, gallberries, sweet bay, wild sunflowers, yellow jessamine, golden rod, orange bloom, snow vine, basswood, sweet gum, etc., etc." There is no reason why the honey cannot be gathered. With all these natural requisites of building up the colonies to perfection, by the time when the mangrove season opens.

There seems to be a great diversity of opinion among the Florida apiarists in regard to the cabbage palmetto. Some assert that "the bees neither gather honey or pollen from its bloom," while others are equally confident that "it equals in every respect the mangrove, as a honey producer;" while others affirm that "it yields pollen only." Different situations probably accounts for the varied results, like many of our own honey-producing shrubs, trees, etc.

Florida has its disadvantages, like all other great honey-producing States, and will, till the tide of immigration is sufficient to establish railroads and water conveyances. New Smyrna is 125 miles from the nearest express office, and for transportation the inhabitants have to "depend on schooners along the coast." A small steamer has been put on between Jacksonville and New Smyrna, for the winter, but is taken off in the spring; this steamer makes one trip a week, but all this will be removed as soon as business springs up, and the country becomes more settled.

Besides "being out of the world," we have the bear, dragon fly, several bee birds, and scores of other enemies to the bee to contend with, and, for that reason alone, we wish the entire country was settled up, while the bee moth reigns supreme, which is owing to the fact that what bees were kept by the old inhabitants, were in the old "gum or moth harbor."

A few more interesting items may not be amiss. W. S. Hart, of Hawks Park, has nearly 100 colonies of bees, and has the best out-fit, consisting of the improved machinery for carrying on the business, foundation machine, evaporating machinery, etc., that there is in Florida.

A. J. Packwood has started with 20

colonies, and has, during last season, taken several thousand lbs. of honey.

H. Olson and Mr. Wilson, from Ohio, seven miles south of New Smyrna, have 184 colonies, the largest apiary in Florida. They make bee-keeping their sole occupation, and are supplied with machinery for the manufacture of hives and everything pertaining to them, and work up an immense amount of lumber during the year. Their bees are mostly Italians, with some hybrids and a few blacks. This seasons crop toots up 25,800 pounds of the best honey we ever sampled.

In regard to the quality of Florida honey, Mr. C. F. Muth, of Cincinnati, who has handled most of the crop produced by these gentlemen, says "he considers their honey the finest *ever placed on the market*, and that it sells more readily than the white clover honey of the North."

L. H. Bivens, of Glencoe, has 37 colonies, and has shipped, this year, 2,000 pounds. M. B. Rolfe, also of Glencoe, has 8, which has produced 600 pounds.

R. S. Sheldon is one of our oldest bee-keepers. He has, for years past, shipped thousands of pounds of excellent honey, and last year his success was very satisfactory. In the spring he had 53 colonies, increased by artificial swarming to 84, and took thus far, Oct. 1, 6,300 pounds. From a natural swarm hived April 15, 328½ were taken, up to Aug. 15.

Mr. Morrison Lewis, of New Smyrna, is the pioneer in bee-keeping in Florida; that is, he was the first to make bee-keeping pay. He commenced in 1868 with one wild swarm, which he found in the woods, which did finely, increasing to several colonies, besides producing a large amount of honey, the second year, which showed Mr. L. what they were capable of doing, when properly cared for. He received 25 to 30 cents per pound for all his honey, for some eight years. He introduced the first movable comb hive and the first honey extractor into the State, and shipped the first barrel of honey, gathered in Florida, to New York, in 1876. From his 30 colonies, he has shipped, up to Oct. 1, 1882, over 3,000 pounds.

From a private letter received recently from Mr. O. Olson, he states: "I made six swarms from one colony, this season, and took from the old colony 440 pounds of extracted honey. I have, at last, found a climate where I like to stay, in spite of all the insects, which is a great drawback on this coast during June, July and August. A more pleasant and healthy climate cannot be found on earth, and I have lived in Europe and several of the States of America. Smyrna is a place of twelve families, and six miles distant, are twelve more."

I could continue this article to a greater length, but have given the important information sought after by those thinking of going into the business, in Florida. Any further information will be cheerfully given as far as in my power, or by addressing any of the above named gentlemen.

Baltimore, Md., Feb. 12, 1883.

For the American Bee Journal.

Experienced Students of Apiculture.

JESSE OREN.

I cannot see the force of the objections made by Mr. Heddon, page 73, against the views advanced by Dr. Besse in his "advanced step," in recommending diplomas to be given by the North American Apiarian College. It seems to me that Dr. Besse requires of the applicant for honors all that Mr. Heddon requires, and a little more. Mr. Heddon's diploma and "red tape circumlocution," as he calls it, would pass current with the society, and entitle the young man to an examination. Dr. Besse demands an experience of one year in all the manipulations of the apiary. Mr. Heddon, five months, or a bee year, if you please so to call it. Both men are on the same plane in this period of preparation. If Mr. Heddon was one of the examining committee, as he probably would be, and his line of students, with their "red tape," signed "Get there Success," should file into line before the committee, would he not approve them? Would he protest against Dr. Miller's, Doolittle's, Dadant's, Jones', Dr. Besse's, Grimm's "Get there Success?" We believe he would admit all the names to his *ad eundem* list of red tape. They are all well known to the bee world. I am glad they are known, and that they have spoken out. Red tape from any of them would pass a young man into my yard. Still I should prefer the combined red tape of all as being better than of any one alone. One might be all extracted, the other all comb, and half-pound sections at that, too. I might be suited with a mixed husbandry.

Some men are born poets, and must sing; others are born mutes, and cannot sing. There is this difference, also, among bee men. Some few miles from me lives a man who has been "getting there annually" with his 15,000 to 2,000 pounds of honey. He is a local phenomenon, and only known at home. His name is "Get there Success;" but the North American Society knows nothing of him. He has paid $100 per month for an apiarian assistant; and any red tape he should adopt would pass the owner into my yard as competent. We do not want a private monopoly of red tape, but rather, a good supply from every part of the country. In this way, many who are mutes, will come out of their holes and hold up their hands to be seen.

We hold that red tape does mean something; and that if Mr. Heddon has any, he is proud of it, and would not readily part with it. A graduate of Yale or of Ann Arbor does not imply an illiterate person by any means, but, on the contrary, such graduation is *prima facie* evidence of scholarship, the United States over. We do not expect to make such men as Sir Isaac Newton, Kepler and Leverrier by diplomas, nor, perhaps, such apiarist as Mr. Heddon either; yet this admission does not diminish the signification of diplomas. We are friendly to Dr. Besse's "advance step," and believe the Society will so look upon the matter, when it meets in Toronto, next autumn. I have just given Mr. Heddon's and Mr. Jones' address to a young man who wishes to learn our business. I have given him a hope that he may be able to meet us at Toronto and pass examination next autumn. With the hope of success, he is going to work the ensuing summer. But like many lawyers and doctors, he may graduate and afterwards make an honorable living hauling manure and digging potatoes.

La Porte City, Iowa.

For the American Bee Journal.

Haldimand Bee-Keepers' Association

The Haldimand Bee-Keepers' Association held its third meeting on Saturday, March 31, at Nelles' Corners, Ontario, pursuant to adjournment.

Members present, E. DeCew, President; and Messrs. James Armstrong, R. Buckley, Robt. Coverdale, Ephraim Gee, Wm. Abbott, Joseph Carter, Fred. Mehenbacher, E. C. Campbell, R. Anguish, Ambrose Gloyd, James Gloyd, William Harrison, A. Vanderbugh, Wm. Kindree, David Byers, Henry Smith, Elijah Kindree, R. W. Beam, David Anguish.

Minutes of previous meeting read and approved.

The president gave a short address, after which the first question was taken up.

Two Story Hives.—Mr. Armstrong said it depended on the depth of frames; if the frames were shallow, two stories were an advantage; if deep, one story or 1½ stories was about the right thing. Mr. Buckley thought that when extracting, a double story was not necessary.

The Desirable Style of Hive Cover.—The president exhibited one which met with the approval of the members. It was very similar to those now used by D. A. Jones, and is deep enough to allow for a chaff cushion in winter.

Bottom Boards—Caused considerable discussion. A number of members favoring loose bottoms; others preferring tight bottoms; the majority being in favor of the latter.

Spring Feeding.—The president said the best plan of spring feeding, was that of D. A. Jones, and explained how it should be made. Mr. Byers advocated feeding syrup strained through a cloth; it had worked well. Mr. Vanderburgh thought the best plan of spring feeding was to feed in the fall. Mr. Buckley gave his plan, viz: making a syrup of sugar and flour, pouring it into an empty frame, and putting it in the hive between the cluster. The secretary recommended linseed-cake meal as one of the best substitutes for pollen.

Is it Best that Bees Should Swarm?—Mr. Vanderburgh advocating dividing, as did Messrs. Armstrong and Buckley, and recommended having queens on hand for new colonies. Mr. Kindree thought if the object was to increase, natural swarming was best; if for honey, dividing was best. The majority gave their opinion in favor of artificial swarming. Messrs. Wm Kindree and Wm. Abbott gave their plans for securing swarms.

How to Rear Good Queens.—Mr. Armstrong preferred rearing queens in a full colony, on full sized frames, and explained his method at some length.

How to Introduce Queens.—Mr. Armstrong recomemded the Peet cage, keeping the queen confined until the bees became reconciled to her. The secretary mentioned the plan adopted by Mr. Simmins, of England, who introduced the queen on a frame of bees, with good success.

How to Secure Comb Honey.—Mr. Buckley advocated the use of metal division-boards and section boxes, in the body of the hive. Mr. Gloyd also spoke in favor of that plan, and said it was recommended by prominent bee-keepers. Mr. Kindree was in favor of section boxes in the upper story, leaving the lower story undisturbed.

Register of Each Hive—Its Value.—The president recommended the use of a register for each hive, so that he could tell the condition of his hives without the trouble of examining them every day.

Books and Periodicals.—The secretary advocated the reading of books and periodicals devoted to bee-culture, and thought no progressive bee-keeper should be without one or more good bee papers. In one number of the AMERICAN BEE JOURNAL he had obtained information worth more than the subscription price for a whole year.

Moved by Mr. Armstrong, seconded by Mr. Campbell, that each bee-keeper give a correct report of the number of colonies kept, and the number of pounds of comb and extracted honey from each colony, and what kind of bees.

It was resolved that the next meeting be held on June 16, at 10 a. m., at Cheapside, Ont.

The following statement will show the loses sustained during the past winter:

	Nov. 1882.	April 1883.
Edmund DeCew,	15	5
Robert Buckley,	38	33
James Armstrong,	32	31
Wm. Harrison,	2	2
Ambrose Gloyd,	16	15
Wm. Jack,	8	4
Joseph Carter,	10	9
Robert Coverdale,	6	5
R. W. Beam,	12	9
Wm. Kindree,	15	14
Henry Smith,	2	2
A. Vanderburgh,	9	9
F. Mehlenbacher,	1	1
David Byers,	13	12
Robert Anguish,	37	25
Ephraim Gee,	1	1
E. C. Campbell,	35	32
David Anguish,	4	3
Daniel Rose,	15	7

E. C. CAMPRELL, *Sec.*

P. S. By the above table it will be seen that the loses during the past severe winter have not been very high, and was caused principally by want of stores. I took mine out of cellar April 9, having been confined for over five months, without a flight. Three colonies were dead for want of stores; the rest are in good condition, with the exception of two or three, affected with dysentery.—E. C.

For the American Bee Journal.

Remarks on Various Matters.

J. O. SHEARMAN.

The wintering problem seems to be pretty well worn; but not finally settled yet. My hobby has been packing in chaff, in which way I have been ordinarily successful. I wintered over 100 colonies, last winter and this, without the loss of a colony so far. I had all of my weakest colonies in the cellar, including some that were intended for doubling up; but the weak and strong all seemed to stand, in the cellar, about alike, except a weak one that had the dysentery; an examination showed that they had only uncapped honey left, though they had sealed honey in the fall. Also two nuclei, with reserved queens, starved. The temperature of the cellar was as near to freezing as I could keep it; it was below only once. I found that when the thermometer indicated near 40° (as often advised through the papers). they would become uneasy. I had only 27 in cellar. Those out of doors, packed in chaff, did well, so far, set close to the ground, on a little bed of straw, for under packing. That goes to show that it is not quite sure death.

I once thought that I had a good thing on them, if only they were covered by snow, and said the deeper the snow the better, with a sloping board over the entrance, of course; but now I have got bravely over that. The winter of 1880-81 was our test on that point. Those deep under the snow were very uneasy, while others situated on the south side of a hill, where the wind blew the snow all away from the front of the hives, came out bright, strong and healthy. That was a damp confinement, while, this winter, though snowed under, 2 feet or more, they came out nearly dry, with much better results. My conclusions are that a number of causes may induce dysentery: 1. Extreme changes of temperature, particularly if damp. 2. Thin honey, more especially if soured by changes of temperature. 3. Long confinement, if in conjunction with either or both of the above unfavorable conditions. 4. Undue breeding while confined, or anything that disturbs them while unable to fly.

On the half-pound sections, my advice is to put a variety of packages upon the market, to supply all kinds of customers; the half-pounds are well enough for part of the supply, but if all the honey was put up that way, it would be no higher in price than if all were in one-pound packages. The novelty helps the price at first.

During the past season I increased only from 90 to 107 colonies; though it was a noted season for swarming, for over two months. I did it, partly, by putting one swarm into another hive, from which a swarm had lately issued, increasing the surplus room; and partly, before they got so feverish, by gradual extension of the brood-chamber; at the same time, giving more surplus room. The hive I use enables me to do the latter more readily, as the back of the brood-chamber is movable, the same as a division-board, and I can set them to work in three old-fashioned boxes, with two brood frames, or use 18 of the same sized boxes on the top of 12 brood frames.

I have run 12 colonies all through an entire season without swarming, increasing them to 18 by division, and giving them plenty of surplus room. That was four years ago, in a fast-swarming season; but it takes too much time for a large stock to increase a little at a time.

I had the above mentioned 12 colonies in a location where they gathered plenty of the red raspberry honey, while it was too wet for them to do much on the white clover. It was of very fine quality and flavor, though not so light in color as the white clover honey.

New Richmond, Mich., Mar. 6, 1883.

For the American Bee Journal.

Water for Bees in Winter.

EUGENE SECOR.

I suppose some of our Southern brethren, who have been basking in the sunshine for two months, and whose bees have been "out to pasture" so long that they have forgotten the past winter, will shrug their shoulders and thank God that they do not live in this borean land, when we tell them that we are just taking our hives to their summer stands. Well, I suppose the South is a delightful place to live in, but I have yet to learn that they accomplish more in any of the departments of industry during their long summers, than we in the North do in our short ones. A small portion of Texas came to the front last year in the production of honey, but year by year, the North supplies our leading honey markets, with as fine a quality as can be found this side of California. So, while we can successfully compete with them in the production of honey, perhaps we ought not to be so modest in discussing the wintering problems, which, undoubtedly is anything but interesting reading to them.

I have, to-day, taken my bees from the cellar, where they have been since Nov. 13. The last flight they had last fall, was on Nov. 10. This is the longest period I have ever kept them confined without a flight. My experience, to-day, seems to indicate that they could have endured a much longer night. I never before saw bees so cross in the spring. They are usually so glad to get out and fly, to void their feces, that they did not attempt to sting; but, to-day, I was compelled to don bee-vail and gloves, and, in spite of both, I am now far from "spring poor." There are no signs of dysentery. They did not "spot" their hives during the winter, nor anything around the yard, in their flight to-day. My cellar was perfectly dark, without any ventilation, and ranged, in temperature, during the winter, from 32° to 48°, usually standing at about 45°. It was quite dry. From March 1, I have, several times, watered a part of them, a thing that I never practiced before, but it had the effect to keep them more quiet, and many of them were "just booming" to-day.

Now as to the results: One colony had starved to death. Four out of six, that were on the bottom tier, one foot from the cellar bottom, that had not been uncovered since putting in, and that had had no water, were dead. Only in one hive were the combs moldy, and all had sufficient stores. Those colonies which had been watered since March 1, were strong and healthy, and began to rob in less than an hour after having been set out.

Soft maples, willows, cotton woods, and elms are in bloom. The prairie anemones have been out for some days. The past winter has been one of the coldest known since the early settlement of the State. For about nine weeks from the 20th of December, it hardly thawed on the south side of the house, and the mercury hugged the zero point most of the time, occasionally dropping down to call on numbers 35 and 40. And for fully three months it was too cold for even a healthy bee to venture far from the warmth of the cluster. Fruit trees, in many parts of the State, have been injured; though in this locality we have not suffered in that respect. Bees have also wintered usually well.

Forest City, Iowa, April 16, 1883.

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For the American Bee Journal.

Are Bees Taxable?

JESSE OREN.

Mr. Editor:—On page 42 of the Bee Journal for 1883, you are asked, "Are bees taxable?" Your answer, as given, is in accordance with the facts; but your conclusion is wrong, viz.: property of value is taxable property in Iowa. The statute of a State fixes and names the kinds of property on which a revenue shall be raised. In Iowa, bees are exempt by statute, and about all your patrons here are anxious that you shall so answer. Of course I know that it is not reasonable to expect you to know the laws, etc., of all the States. I have made this matter a special study years ago, and the matter was determined by the Attorney General about 15 years ago, when a special bill was got up by a member of the Legislature, exempting bees, etc. He said that bees were already exempt. But year after year we put in assessors and boards of supervisors who are ignorant of the law, and who reason that all property ought to bear its share of the public burden—good reasoning—but not Iowa law. But who knows any better than you do that the average assessor's judgment as to the value of a colony of bees on the first day of January is a very poor judgment. He cannot set true values. Enclosed you will find a spicy digest of the subject written by a lawyer of Black Hawk County, Iowa. He had my assistance in the matter. We must, however, fight the battle over and over, year after year. The question is not, "Should bees be taxed in Iowa?" but, "Are bees taxable under our laws?" Please, hereafter, when asked that question, answer, "Not by the laws of Iowa, etc." The Bee Journal, with that answer, will become notorious property, and will be preserved for the eye of the new assessor.

La Porte City, Iowa, Feb. 5, 1883.

ARE BEES TAXABLE?

Mr. Editor:—Allow me to ask yourself and readers why it was that the board of supervisors of Black Hawk County, on Friday, Jan. 10, adopted Mr. Jenney's classification of taxable property for the year 1879, without first revising it so as to make it legal? I trust that they acted conscientiously in the matter. But will you please, or will somebody please, explain how and where they got their authority for placing bees upon that list? Perhaps our board did not know that they were exempt from taxation in Iowa? Perhaps they have some authority unknown to outsiders? Will somebody please rise and explain?

Now, Mr. Editor, "let us reason together," and see if we can find a little law which is, and ought to be plain, to every reasonable being, at least after it has been pointed out to them. I believe I can show by statute that bees are as plainly exempt as if they had been written in gilt letters at the head of the chapter of exempt property. First, what are bees? Are they vegetables? Are they minerals? Or, are they animals? To which of these kingdoms do they belong? Of course, you and everybody else will say that they are animals, of the insect order. Now, since they are animals, then, as animals, they are twice exempt under the statute. Exempt from taxation, first, by section 797 and 801 of Code of Iowa, 1873. Section 797, division 4, exempts from taxation "animals not hereafter specified." Section 801 enumerates the animals, viz.: "Horses, cattle, mules, asses, sheep, swine." Now, we see that it does not mention bees, nor does it intend for bees to be listed, or it would have mentioned them. At a glance we can see that to have mentioned all the animals exempt would have been an endless task, and when completed would have been a volume of itself, and only merited our ridicule. It might have read like this, viz.: From the animal kingdom there shall be exempt 20 species of the quadrumania, viz.: The buffalo, the elk, the deer, the cat, the dog, the mouse, etc. Of cetacea species, the oyster, the clam, etc. Of birds, the wren, the robin, the swallow, etc. Of reptiles, the lizzard, the garter snake, the bull snake, etc. Of insects—30 species—viz.: The hornet, the wasp, the asp, the bee, the bumble bee, and so on, *ad infinitum*. But the cobra-copella, the rattlesnake, the grizzly bear, the parrot, the seal, the golden fly of South America, owing to the vast amount of money invested in them for show purposes, shall be listed and taxed at twice their appraised value. Such might have been the form of the section had the Legislature attempted it. But they chose a wiser plan, and only enumerated those animals which were to be taxed, and exempted by section 797 all others—bees with the rest.

Again, according to Langstroth and other standard authority, the average life of a working bee, in summer season, is only six weeks, while it is a mooted question whether any worker ever lives to so great an age as seven months. Now, a bee being an animal, under section 821 (last clause), under "classification of property" for taxation, we find that "no entry shall be made on said books of any animal under the age of one year, except swine." The queen-bee is the only bee which lives to so great an age as one year. Her market value is 75 cents, and thousands are annually sold to A. I. Root, of Medina, O., at that price. We find by this section (821) that bees are again exempt. "Well," say some, "it is not the bee, it is the value." To this we again fall back on section 797, where we find "farm produce harvested within one year previous to the listing thereof," is exempt from taxation; and since all that is valuable in a colony of bees, except the 75 cent queen-bee, is harvested "within a year previous to the listing thereof," and comes in exempt along with thousands of bushels of wheat which the farmer may have in his granery or stack, the thousands, yes millions of dollars worth of wearing apparel, including valuable household furniture, thousands of dollars invested in swine under six months old, calves, colts, chickens, and the like, even down to a $5,000 shawl, such as Mrs. L—— is said to wear, and other articles of a wardrobe proportionately expensive. From the list of exempt property, it is plain to be seen that it is not the intent of our law to tax all valuable property, for if it did, why exempt so many millions of valuables? In conclusion I would say that I have not talked with any lawyer, who, after a little reference, did not see the exempt condition of bees under our law. I might refer to Clark & Curtis, of Lemars, Ordway, of Waterloo, Judge Gilchrist, of Vinton, the two law firms in our own city, viz.: Bishop & Sharon and Chas. Bishop, and many others whose names I will not occupy time and space to enumerate.

Now, Mr. Editor, please excuse this space-consuming article, as my object in penning this is to aid in the support of the Constitution of the United States and the laws of the State of Iowa.

S. A. O.

[We are very glad to make the correction requested. Certainly, on this showing, in Iowa, bees are *not* taxable property.—Ed.]

SELECTIONS FROM OUR LETTER BOX

Are Bees Taxable in Iowa?

Will you please state whether the laws of Iowa exempt bees from taxation? All agree here that if bees are animals they are then exempt. Some think they are insects.

PETER S. TRIEM.

Mt. Auburn, Iowa.

[We are informed that the Attorney General, some 15 years ago, decided that in Iowa bees are not taxable, and according to the laws of that State, they are not assessable. Apiarists in Iowa should show this to the new assessors.—ED.]

Honey Flow in Louisiana.

There has been a fine flow of honey; the bees are in splendid condition. I have been running for increase, and yet from 100 colonies I have taken 3,500 pounds of good honey. I shall start for the North about April 25, with a lot of colonies.

E. T. FLANAGAN.

Kenner, La., April 16, 1883.

A Beginner's Experience.

My father kept bees as long ago as I can remember, and I was always fond of them. About 5 years ago, I and a neighbor procured about a dozen each, and as we had heard of the new way of dividing, we divided them again and again, expecting to get rich in that way, but the winter cleaned us out of the bee business. Taking the advice of a friend, I subscribed for the BEE JOURNAL and bought Cook's Manual, and concluded to try again, after learning more about bees. I sold enough honey to pay for my bees, and all that I had over spent on them, and still have the bees left. They are in good condition now, and will be ready for the harvest when it comes.

Casey, Ill. D. R. ROSEBROUGH.

Wintering Bees, etc.

As dry sawdust is hard to get in the fall, I procured it dry, after harvest, and had plenty in the fall. I have tried chaff with success, but do not want it any more; it harbors mice, and gets damp very quickly. I must either clip the queen's wings or run a great risk of my neck, so I choose the former. I like a deeper frame than the Langstroth, for Canada. I want my frames crosswise; I think a division-board as needful as the hives. I use an outside box about 6 inches larger than the hive, with the entrance bridged, and packed around and on top (with movable side), pressed tight on sawdust. In frosty mornings, in the fall, I remove all outside combs, which can be done very fast, and feed up, on from 5 to 7 frames. Where do bees cluster in the fall and winter? Below the honey; the only place for them, and just where they should, to give heat for sealing; they have warm honey all winter. I have yet to lose the first good colony prepared in the above manner. I have no carrying to do, in the spring, and bees are packed all the spring, and are not coaxed out, with every sunbeam, to get lost. Two colonies starved, in Langstroth hives, with honey in the hive; sometimes bees cluster in the centre, and getting to the end of the frames in a cold spell, they will starve with honey at the other end. Some of my bees have not flown for 147 days; neither do they seem to want to. They are in excellent condition, with about 5 inches of sawdust on the top. For such a terrible winter, bees that are packed have wintered well. My experience will not agree with that of Prof. Cook, as stated on page 85 of his Manual. In every case, with me, the field bees have decided what shall be done. Last summer I found them keeping the queen from drone cells, and even using violence to stop her from laying drone eggs. I learn from them as to whether there should be a second swarm or not.

CHAS. MITCHELL.

Molesworth, Ont., April 9, 1883.

Willows for Pollen.

I send a shoot taken from a bush or tree, for identification. I find it literally covered with bees, for the sake of the profusion of its pollen. I can liken their labors upon it to nothing else except what we have all witnessed at the rye meal basket. I take it to be a species of the willow, of which Dr. Barrett (1850) enumerated 100 species growing in North America.

WM. S. BARCLAY.

Beaver, Pa., April 17, 1883.

[It is one of the willow family, as you have surmized.—ED.]

My Experience With Bees.

I have had bees for more than 30 years, but never paid much attention to them until the spring of 1879, when I concluded to give them my attention (having quit active business), and to that end, I procured a book on the subject, read the science up, and thought I was master of the situation. Having 5 colonies of black bees I divided them according to instructions in King's Text Book, and succeeded beyond my expectations; in the fall I found myself possessed of 10 colonies in good condition for winter, and got some surplus honey. I put them in the cellar, and they came out all right in the spring of 1880. I again divided and had 20 in the fall, and got a small amount of surplus; all being heavy and in good condition for winter, I thought I would try out-door packing, and packed 10 in oat straw and chaff (after Mr. Heddon's plan), and 10 put in the cellar. March being so pleasant I set set them all out, and unpacked those that were out, all being in good condition, so far as I could see; but April and part of May being wet, cold and windy, they commenced to die off very rapidly, leaving nice clean combs full of honey, so by the middle of May I had but one weak colony left, which died in the fall, after all my nursing. With over 100 frames full, or partly full of honey, I concluded to try it again, and bought 12 colonies, part hybrids and part blacks, and got one colony from Mr. King, of New York. Increased them to 26, and got 335 lbs. of box honey, which I sold at 20 cents per pound, which paid for the 12 colonies bought. I put them away for the winter, packed in the summer stands, as before, all in good condition. They came out in the spring of 1882 without the loss of a single colony. Expecting big things, I bought $47 worth of supplies, and increased my stock to 48, by my former method a little modified. Upon examination Oct. 1, I found them nearly all short of winter stores, some not having 5 lbs. of honey, and I got no surplus, except from one colony, and that gave me about 25 lbs. of inferior honey. I did not like to see them die, if I could help it, so I bought two barrels of coffee A sugar, and made it into sryup and fed them, so they averaged in weight from 18 to 30 lbs. I have packed them in plainer shavings. I suppose there never was a worse season for honey in our county before.

WM. B. MCCORMICK.

Uniontown, Pa.

Queen Nursery, Observing Hives, Etc.

Please answer the following questions in the BEE JOURNAL:

1. Seeing that queen nurseries are required for the purpose of having a supply on all occasions when needed, and few bees can be spared for such nurseries, how are they to be protected through the winter; it being necessay to have them strong to keep up heat for winter protection? As high a temperature being as necessary for a weak colony as a strong one, and the natural heat will not be sufficient, how is more heat to be created? I have never seen anything giving instructions on this subject, although Prof. Cook so strongly urges rearing queens.

2. In the observatory hive, as described by Prof. Cook, page 113 of the present volume of the BEE JOURNAL, which, of course, is intended to be in the house, study, or some such place, should not the alighting board be at an open window, for the egress and ingress of the bees, to prevent them coming into the room, where it is desired to see them? I suppose that, during the winter season, the observatory hive may become a queen nursery.

3. What plan must be taken to stimulate late breeding, as urged in Cook's Manual? He gives the advice, but not the information which is necessary to many; in fact to all who have not had the experience in that way. If the bees have plenty of honey, is there something else better for that purpose?

EDWARD MOORE.

Barrie, Ont.

[Prof. Cook replies to the above questions as follows:—ED.]

1. I suppose Mr. Moore means by queen nurseries the small colonies or

nuclei in which the queens are reared. Judge Andrews, of Texas, says queens can be kept caged indefinitely by putting the cage in strong colonies. He says even though the other colonies have queens, the bees will always feed the caged queens. Mr. Alley says in his book, the queens may be thus caged for long weeks, but that there must be feed in the cage; that the bees will not feed them. I have always kept the queens in the small hives or nuclei. By exchanging combs frequently, giving empty cells, the queens are kept active. With a good cellar nuclei can be kept over winter as well as full colonies. The chamber containing them must be small; either a small hive, or, better, the regular hive, with brood-chamber contracted by use of a division board. My brother has kept several nuclei in his cellar the past winter. All but one came through strong. That died of starvation.

2. My observing hive is on a board just outside the window. It is just high enough to be convenient. By lowering the upper sash I can lean on it and study the bees for hours without fatigue. My window is a dormer, so it shades the bees in summer and protects them from storms.

2. I think stimulative feeding is fully described in my Manual. We only need to feed a half pint a day, by the use of any of the feeders described. I think the Smith feeder, illustrated and described in my new Manual (just out) is the best.—A. J. Cook.

The Season in Georgia.

Spring has fairly opened with us at last, but bees are in a backward condition. February was mild and pleasant, and breeding progressed rapidly, March set in cold, and continued so with wet and inclement weather all through. Bees could do nothing, but dwindled fearfully; so by the 1st of April colonies, on an average, were not in as good condition as they were the last of February. Box hive bee-keepers have lost heavily.

J. P. H. Brown.

Augusta. Ga., April 20, 1883.

How to Press and Mount Flowers.

In the Michigan State Fair premium list (apiarian department) is offered a premium for the best collection of honey-bearing plants pressed and mounted, or in bloom. Will some one who knows please tell the readers of the Bee Journal how to press and mount flowers?

W. Z. Hutchinson.

Rogersville, Mich.

Bees Still in Winter Quarters.

In the spring of 1881, I had 4 weak colonies, and 2 queenless; they increased to 10, and 1 nucleus, fall count; all were packed in chaff. The spring count of 1882, was 9, and 2 queenless. I had from them 500 lbs. of comb honey, and increased to 28; they were all packed in dry goods boxes, with clover chaff. The spring count of 1883, is 27 in splendid condition; I lost one, caused by old bees and dysentery. My bees are still packed; I expect to leave them so until about May 1, or until the weather becomes settled and warm. My bees are all Cyprians, Italians, and albinos, and I am well pleased with them. I use the A. G. Hill hive, and think it a good one. We have some old fogies here, who keep bees in box hives and brimstone them, etc., and some of them have lost heavily this winter. I could not do without the Bee Journal.

H. Hance.

Bryon, O., April 16, 1883.

Bees All Right.

I have just unpacked my bees, and find nearly all in booming condition. My loss for the winter has been light. I packed, in my usual way, 165 colonies, and, to-day, I find 160 in good condition. Never did I ever see bees in better condition than mine now are. The hives are nearly full of bees, and in some I find brood in four and five frames, with capped drone brood. The weather has been fine for nearly three weeks. I anticipate a fine crop of honey. The white clover has never looked more promising than it does this spring. Success to the Weekly Bee Journal.

L. J. Diehl.

Butler, Ind., April 17, 1883.

North Carolina Bloom.

Apples are in full bloom, and clover soon will be. I lost 15 out of 100 colonies, last winter. My bees are very strong at this time, and promise great things, if we have a good season.

J. W. Hinsdale.

Raleigh, N. C., April 13, 1883.

Bees are Just Booming.

I wintered 42 colonies in the cellar, of which I lost 1; of 19 wintered on the summer stands, packed with sawdust, I lost none; leaving me 60 out of 61 colonies. I put them into winter quarters on Nov. 15, and removed them from the cellar, April 10, making about 145 days in the cellar without a flight. There is but little spotting of the hives; all are in fine condition and strong, excepting about 6 which are a little weak, but still are from fair to good colonies. All are gathering natural pollen, to-day, from willows and soft maples, the first this season. The thermometer indicates from 78° ro 82°, and it is raising quite briskly this evening, at 8 o'clock.

U. E. Dodge.

Fredonia, N. Y., April 15, 1883.

How to use Bee Papers.

I think the printers have scarcely followed "copy," or I have made a strange blunder in my communication, published in the Bee Journal, March 28, page 166, third paragraph. I intended to have written: "Any man who cannot make his business pay for a good journal published in the interest of that business, had better quit the business, etc.," or words to that effect. It now, however, reads: "Any man who cannot make his business pay had better quit the business, etc." You will at once see the difference. The latter quotation, I presume, goes without asking by the necessities of the case, and does not need a special communication to state it, but while the former may be equally as true, yet it is so often in practice ignored as to need a reminder.

R. J. Kendall.

Austin, Texas, March 30, 1883.

[It was printed as written in the copy.—Ed.]

Bees Confined 159 Days.

On page 180, Mr. McKay says who can beat 130 days without a flight? Well, I can. My bees have been in the cellar 159 days without a flight, and have some 10 days more to remain, at least. All answered to the roll call to-day, "21 in number;" loss, thus far, none. The dead on the floor can all be put into a two-quart measure. The above success is due, in a great measure, to the American Bee Journal, of which I have been a constant and interested reader for three years, and never expect to do without it as long as I keep bees. I use chaff mats, and am a strong believer in cellar wintering.

D. L. Herrick.

Brattleboro, Vt., April 15, 1883.

A Swarm Went to the Woods.

I had 4 colonies of bees in boxes and barrels. Three of them I transferred more than a month ago, in the ordinary way. The boxes broke, and induced robbing, and I had so much trouble that I determined I would let the fourth wait and swarm. But seeing Mr. Heddon's plan, I concluded to try it, especially as the weather was warm, apples, clover, etc., blooming, and several colonies of my neighbor's bees had swarmed during the last few days. I very soon drove the bees into the hive filled with comb foundation; they remained several hours, and took their departure to the woods. I hope others may profit by my experience.

A Subscriber.

Omega, La.

Stinging and Dislike of Bees.

The bees have a natural dislike to me; they come for me quickly, even when walking in the yard, but not at work with them. One sting will sometimes almost cause me to faint. The rule, that the more a person gets stung, the less it hurts, does not hold good with me; the pain is as severe as it was five years ago. I wear veil and gloves, and have a Bingham smoker, but I get stung often. To allay the pain, after the sting, wet clay is the best thing I have ever tried. The best antidote I have ever tried is whisky; two teaspoonsful before I go to work with the bees. I am not used to whisky, and do not want to be; I hate it. Will some of the readers of the Journal tell me what, if anything, I can put on my clothes to pacify them; and what is the best antidote besides whisky, and oblige one who cannot follow hard labor, and do not want to throw away what it has taken 15 years to learn.

Riverton, Iowa. J. H. Stephens.

Convention Notices.

☞ The Mahoning Valley bee-keepers will hold their 13th meeting in the Town Hall, at Berlin Centre, Ohio, on May 5. All bee-keepers, and the public in general, are invited to attend. Do not forget to bring your wives, children, and a well-filled lunch basket. We expect a grand meeting.

L. CARSON, *Pres.*
H. A. SIMON, *Sec. pro tem.*

☞ The semi-annual meeting of the Western Bee-Keepers' Association will be held at Independence, Jackson County, Mo., on Saturday, April 28, 1883, at 10 a. m. Papers prepared for the occasion by the president, secretary and others will be read, and matters of general interest to bee-keepers discussed. A general attendance of persons interested in bee-culture is requested. The present membership of this Association control 2,000 colonies of bees.

S. W. SALISBURY, *Sec.*
Kansas City, Mo.
J. A. NELSON, *Pres.* Wyandotte, Kas.

☞ Quite a number of the leading bee-keepers of Missouri and Kansas met at the Court House, in Independence, Mo., December 23, 1882, and organized a bee-keepers' convention, which was named the "Western Bee-Keepers' Association," by electing the following officers for the ensuing year: Jas. A. Nelson, of Wyandotte, Kans., President; L. W. Baldwin, of Independence, Mo., Vice-President; S. W. Salsbury, Kansas City, Mo., Treasurer. The Association passed a resolution to invite all bee-keepers within a convenient distance, to meet with us at our next meeting and lend us their councils. Adjourned, to meet again at Independence, on the last Saturday in April next, at 10 o'clock, a. m. J. D. Meador, P. Baldwin, C. M. Crandall, *Committee.*

☞ The spring meeting of the Western Michigan Bee-Keepers' Association will be held at Supervisor's Hall, Grand Rapids, April 26, at 10 a. m.

F. S. COVEY, *Sec.*
Coopersville, Mich.

☞ The Union Bee-Keepers' Association will meet in Grange Hall, Eminence, Ky., on Thursday, April 26, 1883. All bee-keepers, and the public generally, are invited to be present.

G. W. DEMAREE, *Sec.*
Christiansburg, Ky.

☞ There will be a meeting of the bee-keepers of Western New York and Western Pennsylvania, to adopt a constitution and by-laws, elect officers, etc., for the Western New York Bee-Keepers' Association, on April 28, 1883, at Fredonia, N. Y., opening at 10 o'clock a. m. All bee-keepers are cordially invited to attend. Discussions on bee-culture, etc. Suitable rooms will be provided.

U. E. DODGE, *Acting Sec.*

☞ The Tuscarawas Valley Bee-Keepers' Association will hold their next meeting in the Town Hall, Coshocton, O., on Wednesday, May 2, at 10 a. m. All bee-keepers are requested to be present.

J. A. BUCKLEW, *Sec.*, Clarks, O.

☞ The spring meeting of the Cortland Union Bee-Keepers' Association will be held in Cortland, N. Y., on Tuesday, May 8, 1883.

M. C. BEAN, *Sec.*

☞ The Iowa Central Bee-Keepers' Association will hold their semi-annual meeting at Winterset, Iowa, on Friday, May 11, 1883. All interested in anything pertaining to bee-culture are invited to attend, and bring anything that will be of interest to the bee fraternity.

J. E. PRYOR, *Sec.*
A. J. ADKISON, *Pres.*

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., April 23, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The nominal price of extracted is 7c. for dark and 9c. for light—here. The supply is abundant and sales are slow.

BEESWAX—None in the market.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—There is no excitement in the honey market, but sales are fair to our regular trade. Offerings are plentiful of extracted and comb honey. Extracted brings 7@9c. on arrival. The sales of comb honey are very slow, although there is a large supply of first-class quality on the market. It brings 12@18c. on arrival.

BEESWAX—Comes in slowly and brings 20@30c per lb., according to quality. CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand is light and it is not now probable that all of the comb honey can be sold before a new crop comes. Prices are very irregular and generally low: 15@16c. for white, and dark unsalable. Extracted, very little trade is being done in it. 7@9c. is about the market.

BEESWAX—35@36c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—Buyers are readily obtained for choice comb or extracted at full figures, but off qualities meet with slow sale.

White comb, 14@17c.; dark to good, 11@13c.; extracted, choice to extra white, 8½@9½c.; dark and candied, 5@7½c.

BEESWAX—We quote 30@33c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Very quiet; dull. Comb at 14@16c.—some inferior sold at 10c.; strained at 6½@7c., extracted at 7½@8½c., lots in small packages more.

BEESWAX—Scarce and wanted at 35c.

W. T. ANDERSON & CO., 117 N. Main Street.

CLEVELAND.

HONEY—Is a little lower, and at the lower price it has moved off a little better of late. 1-lb. sections of best white sold at 18½@19c.; second grades, 1-lb., 17c.; 2-lb. sections a little slow at 17@18c. Extracted very dull at 9@11c.

BEESWAX—None in market.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—Our supply is gone; we have none to quote.

CROCKER & BLAKE, 57 Chatham Street.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1 year, for the Weekly, with **$4**, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For **three** subscribers, with **$6**, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For **four** subscribers, with **$8**, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For **five** subscribers, with **$10**, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

☞ Mr. James Heddon announces on another page that he cannot supply any more Hives, etc., in the flat. All interested should notice the advertisement.—*Adv.*

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts each, or $8 per 100.

☞ Do not let your numbers of the BEE JOURNAL for 1882 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

An Instantaneous Light.

Such in a word is the unique apparatus on exhibition at the rooms of the Portable Electric Light Co., 22 Water Street, Boston. It occupies the space of only 5 square inches, and weighs but 5 pounds, and can be carried with ease. The light, or more properly lighter, requires no extra power, wires or connections, and is so constructed that any part can be replaced at small cost. The chemicals are placed in a glass retort; a carbon and zinc apparatus, with a spiral platinum attachment, is then adjusted so as to form a battery, and the light is ready. The pressure on a little knob produces an electric current by which the spiral of platinum is heated to incandescence. The Portable Electric Light Company was recently incorporated, with a capital of $100,000, under the laws of Massachusetts. The usefulness of the apparatus and the low price (five dollars) will no doubt result in its general adoption. Some of the prominent business men of the State are identified with this enterprise. In addition to its use as a lighter, the apparatus can also be used in connection with a burglar-alarm and galvanic battery. — "Boston Transcript," Dec. 30.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

☞ Postage stamps, of one, two or three cent denomination, accepted for fractional parts of a dollar; but money is preferred.

☞ Will the various manufacturers of the Standard Langstroth hive please send circulars giving accurate dimensions, as made by them, to S. X. Clark, Delavan, Wis. The result as to the different sizes will be published in the AMERICAN BEE JOURNAL.—*adv.*

New Catalogues and Price Lists.

We have received the following new Catalogues and Price Lists of Bees, Queens or Apiarian Supplies:

G. B. Jones, Brantford, Ont.
Elvin Armstrong, Jerseyville, Ill.
Geo. W. Baker, Lewisville, Ind.
Dr. Wm. R. Howard, Kingston, Tex.
W. G. Russell, Millbrook, Ont.
J. H. Tilley & Bro., Castle Hill, Me.
Thos. J. Ward, St. Mary's, Ind.
C. R. Mitchell, Hawkinsville, Ga.
G. H. Knickerbocker, Pine Plains, N. Y.
A. C. Kendel, Cleveland, O.—field, garden and flower seeds.

☞ In Mr. S. Corneil's excellent article on "Ventilation of Bees," in last week's JOURNAL, on page 200, an omission was made, when putting it in type. In the second column, 28th line from the top, after the period, add the following sentence: "It is just so with the air."

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

☞ On the next page may be found the advertisement for a "comb foundation fastener," by D. C. Talbot, of Elroy, Wis., to which attention is invited.—*adv.*

Special Notice.—We will, hereafter, supply the Weekly BEE JOURNAL for 1883 and Cook's Manual in cloth for $2.75, or the Monthly and Manual in cloth for $1.75. As this offer will soon be withdrawn, those who desire it should send for the book *at once.*

Golden Italians Again!

One Golden Italian Queen, warranted purely mated, $1.50. One purely mated and tested, $2.50. One pure Queen, not warranted, $1.00.
All the above Queens are of the finest stock in the country. I sold over 300 last season, and had but one complaint. Full colonies ready to divide, for $10.00; safe arrival guaranteed.
17Atf **L. J. DIEHL, BUTLER, IND.**

E. T. LEWIS & CO., Toledo, Ohio,
Manufacturers of the U. S. STANDARD Honey Extractor (new improvements), and all other Apiarian Supplies. Send for circular. 17A 5Btf

BEE-KEEPERS, before ordering your APIARIAN-SUPPLIES send for our large illustrated catalogue, sent free to any address.
E. Kretchmer, Coburg, Iowa.
13A22t5B4t

1883 ITALIAN QUEENS. 1883
Still they go—Bees for business all ready to ship. Send for our new Circular of Queens, full colonies and nuclei; it tells how to introduce queens.
T. S. HALL,
16A2t Kirby's Creek, Jackson co, Ala.

Bee-Keepers' Handy Book,
Or, 22 Years' Experience in Queen Rearing.

Opinions of Eminent Apiarists of its value:

From Geo. W. House, Fayetteville, N. Y.—"The information gained by a careful study of the new method of Queen Rearing, I consider worth $100 to me. It supplies a long-felt want to every Queen breeder and dealer, and is invaluable to any bee-keeper.

From James T. Norton, Winsted, Conn.—"I have read your book with much satisfaction and profit; it is written concisely and to the point. It should be in the hands of every bee-keeper."

From Rev. D. D. Marsh, Georgetown, Mass.—"Your book on Queen Rearing has been received. I am very much pleased with it. It is refreshing to see how frankly you have divulged the hard-earned secrets of your long experience. Your book contains a great deal of that information, which those who have already taken the 'first lessons' in apiculture will find new and valuable."

It will be remembered that Mr. E. T. Flanagan, of Bellville, Ill., went to Kenner, La., in March last to rear early Queens. After receiving the book he wrote me thus.—"I would have cheerfully given $50.00 to have had your book and apparatus here when I first came. I am rearing 300 Queens."

From L. C. Root, Mohawk, N. Y., and one of the most prominent apiarists in America.—"Your book has been received. Its title, 'TWENTY-TWO YEARS EXPERIENCE IN QUEEN REARING,' is enough to convince any bee-keeper that they cannot afford to be without it. Good Queens is the rock upon which bee-keeping rests. I predict a large sale for the work."

From J. M. Hicks, editor of the bee department, American Grange *Bulletin*. Mr. Hicks is well known to nearly all bee-keepers in the west.—"Book received. I pronounce it the best work of the kind, of American publications. I consider it a *perfect gem* for the practical bee-keeper, and should be in the hands of every apiarist."

Until May 1st the book will be sold for $1.00 per copy. After that date, $1.25 per copy, handsomely bound in cloth, and $1.00 bound in paper. Fractionable parts of a dollar can be sent in postage stamps.

Our new circular and price list of Queens for 1883 contains 32 pages, and is illustrated to show our new way of rearing Queens. Send your address on a postal card for it.

HENRY ALLEY, Wenham, Mass.

FOR EXCHANGE.
Comb Foundation Machine for pure Italian Bees.
Address, S. LONGLEY, CINCINNATI, O.
☞ In perfect order. 17A 1t.

The Bee-Keepers' Guide,
OR, MANUAL OF THE APIARY.
9,000 SOLD IN SIX YEARS.
10th Thousand Just Out.

More than 50 pages, and more than 50 fine illustrations added. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World.
I had hoped and expected to make the price one dollar, and it has been so advertised by Mr. James Heddon and in Alley's new book; but owing to the increased size and expense, this is impossible.

PRICE, BY MAIL, $1.25.
Liberal discount to dealers and to clubs.
A. J. COOK,
Author and Publisher, Lansing, Mich.

1000 COLONIES of Italian and Hybrid bees for sale in Langstroth and Simplicity hives.
Three-Frame Nuclei a specialty. Safe delivery guaranteed. Write for particulars and special rates to
FLANAGAN & ILLINSKI,
Box 819. BELLEVILLE, St. Clair Co., ILL.
17A4t 5B2t

Vandervort Comb Fdn. Mills,
Send for Samples & Reduced Price-List.
10A19t **J. VANDERVORT, Lacyville, Pa.**

OLDEST BEE PAPER IN AMERICA
THE AMERICAN BEE JOURNAL
ESTABLISHED IN 1861

VOL. XIX. CHICAGO, ILL., APRIL 25, 1883. No. 17.

THE AMERICAN BEE JOURNAL
Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

"Paraffine Comb" and "Glucose."

It is trite but *true*, that while "Falsehood rides on horseback, truth travels very slowly on foot." We are forcibly reminded of this upon looking over the last annual volume of Appleton's Cyclopædia, published by D. Appleton & Co., of New York. It is very evident that the compiler of that volume has been imposed upon by the notorious Professor Wiley, who, in June, 1881, originated the preposterous falsehood about "comb honey" being sold in New York, the combs of which were "made of paraffine, and filled with pure glucose, by appropriate machinery," etc.

On page 51, of the Cyclopædia mentioned, while enumerating the uses to which glucose had been put, we find the following:

> "Glucose is used chiefly for the manufacture of table syrups and candies, for brewing, as food for bees, and for artificial honey. . . . . . Glucose is very extensively fed to bees, which eat it with great avidity, and store it away unchanged as honey. It is also put up directly in trade as honey—with which bees have had nothing to do—being put up by means of appropriate machinery into artificial combs made of paraffine."

When this pernicious falsehood first appeared, it was extensively copied by many papers all over this country, and quoted by men of learning and influence, and we endeavored to counteract it, by showing its falsity and absurdity, and calling upon its author for proof. Being hard pressed, this scientific *joker* admitted the absurdity and falsity of his "story," but consoled himself with the idea, that people in general were too thick-headed to see the "joke," as he stated in the Indiana *Farmer* last June, which was copied into the BEE JOURNAL of June 14, 1882, and commented upon.

Mr. Wiley's own version of the origin of the story [lie], and our remarks, are as follows:

> Perhaps it may be well enough to give here the origin of the "paraffine comb" story which has appeared, I believe, in almost every publication in the country. The original appeared in the *Popular Science Monthly* for June, 1881, in an article entitled "Glucose and Grape Sugar," which I contributed to that number, and on page 254, occur the following words: "Bees eat glucose with the greatest avidity; or rather, they act as funnels by which the glucose is poured into the comb. For it is quite true that the honey made by bees which have free access to glucose differs scarcely at all from the glucose itself. But the quantity of honey which a bee will store away when fed on glucose, is truly wonderful. This gluttony, however, rapidly undermines the apiarian constitution, and the bee rarely lives to enjoy the fruits of its apparent good fortune. In commercial honey, which is entirely free from bee mediation, the comb is made of paraffine, and filled with pure glucose by appropriate machinery.
>
> This last clause which, when written, was meant for a *scientific pleasantry*, came near throwing the whole bee world into epilepsy. It appears that persons who devote themselves to BEE JOURNALS, undergo a certain cerebral inspiration which renders them incapable of seeing a *joke*. The only point which they can appreciate seems to be the sting of a bee.

The rejoinder reminds us of an anecdote we heard many years ago, located in a rural district in Indiana. A well-to-do-farmer lost a very fine filly from his pasture-lot, and after several days' search found it snugly tied in the log barn of a distant neighbor of doubtful repute. The neighbor was indicted, tried, and found guilty of larceny; when the Judge asked what he had to say, wby sentence should not be passed, he put in a plea that the animal was only taken for a joke. The Judge inquired how far his barn was from the pasture lot, to which he replied, "about 5 miles." "Well," said the Judge, "that is carrying a joke too far; hard labor in the penitentiary for seven years." The writer above says he contributed to the *Popular Science Monthly* his "paraffine comb" story [lie] about a year ago, "which has appeared in almost every publication in the country." The latter part of the article, however, was only meant for a *scientific pleasantry*.

Do scientific men indulge in pleasantries which will cast a gloom over thousands of honest producers throughout the country, and depreciate the value of their product by creating a prejudice against it? For nearly a year this *scientific joker* saw his fabrication published in nearly all the papers in the country, and reiterated from across the ocean, and yet he lacked the manhood to affirm it a joke until "the BEE JOURNAL man" counteracted its influence by showing the falsity and absurdity of the article. Whether it be true, as has been often intimated, that the story was instigated by parties interested in the glucose traffic, in retaliation for the hostility of the bee men to their frauds, we cannot affirm; but we do believe it originated with no honest intention.

Now we would respectfully call upon Messrs. Appleton & Co., to make the correction in the next annual volume of their Cyclopædia, not only in justice to themselves, but for the sake of truth and right, and thereby aid, as far as possible, to counteract the injury they have already done the honey producers of America, by giving publicity to the fabrication of the self-admitted inventor of the pernicious falsehood; which he says he intended as a "joke" or "scientific pleasantry," but which has been taken in earnest, and copied and quoted as sober facts throughout the world.

When papers like the *Popular Science Monthly*, and books like "Appleton's Cyclopædia" are imposed upon, and unwittingly publish to the world as a fact, what this man, Wiley, well knew was an impossibility, and only the "silly imagination" of an unbalanced mind—is it to be wondered at, that ordinary papers and the common people should be "incapable of seeing the joke?" Evidently Wiley intended the story to make him famous, and cause a sensation! Has he not succeeded, in making fame? Surely; but it is, and should be, written—*infamous!* His "scientific pleasantries" are but falsehoods, both unscientific and *unpleasant!* While his "jokes" bear the closest affinity to the senseless jests of odiocy, and the foolishness of a maniac.

Postage and Money Orders.

According to the new Postal Laws, important changes are to be made during the next few months. In order to save a multitude of questions we will give the main features of the new regulations, which should be studied by all interested.

On and after Oct. 1, 1883, letter postage will be 2 cents for each half ounce or fractional part thereof, between all points in the United States. The rate will then be the same on drop letters and all others. No changes are made in rates on other classes of matter. On and after the 1st of July, 1883, you can obtain at any money order office, postal orders in sums of $5 and under, by paping a fee of *three cents*. These postal notes will be made payable to bearer without corresponding advices. They will be payable at any money order office within 3 months of the date of issue. After the lapse of that time the holder can obtain the par value, only by applying to the Postoffice Department at Washington. On and after the 1st of July, 1883, you can obtain a postal money order for as large a sum as $100. The present limit is $50. The fees on and after that date will be as follows:

Not exceeding $10	8 cents
From $10 to $15	10 cents
From $15 to $30	15 cents
From $30 to $40	20 cents
From $40 to $50	25 cents
From $50 to $60	30 cents
From $60 to $70	35 cents
From $70 to $80	40 cents
From $80 to $100	45 cents

The postal notes will be found more convenient in one respect than the fractional paper currency was, since they can be obtained for any number of cents under $5. There will also be less liability to loss by theft than there was when fractional notes were used for transmission through the mails, especially if the department uses judgment in prescribing the size and form of the notes, and in selecting the paper on which they are to be printed. After the 1st of October the cost of sending any sum under $5, by postal note, will be 5 cents—2 cents postage and 3-cent fee.

This will be a great advantage to our subscribers, making a cheap and safe method of sending money in letters for subscription or advertising.

◆

Transferring Bees.—Mr. G. B. Jones, Brantford, Ont., thus describes his method of transferring bees. The special feature of his hive is the arrangement of entrances, which are three in number—one in front, and one at each side, the former being twice as long as the latter. The front one is, of course, essential. The advantages of the others are by him described as follows:

In aid of transferring from an objectionable hive, proceed thus: Place the old hive 3 to 6 inches from the new, with its entrance opposite either side-entrance of the new; construct a closed passage between the two hives; place a piece of D. A. Jones' perforated queen metal over the inner side of the same side-entrance; close the other, leaving the front open; put in the necessary number of combs or foundation for the new hive. Now, drum the bees up from the old hive until the queen leaves it; shake them into the new hive; and, covering both hives, leave them for 21 days. The queen will be unable to get back to the old hive, and will settle down on the new combs, and the bees with her, excepting those which go back to care for the brood. As the brood hatches, it will come forward, and in 21 days all will be out. When honey is scarce, they will take it forward also. Now, remove the old hive, close the side entrance of the new; shake any bees remaining in the old hive in front of the new; and melt the old combs into wax, after extracting what honey they contained. This method has been practised by me with success one summer, and on as late as Sept. 20. Colonies may be doubled much the same way; for having the one common entrance they will soon unite, if scented alike artificially.

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☞ Reports from all the States are assuring. The past winter, though severe, has not been a disastrous one. But few losses are reported, and the prospect for a full honey crop is excellent. There is a good sward of clover, having been protected by the liberal amount of snow, and, with a fair amount of propitious weather, there need be no fears of having a poor honey harvest.

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☞ Mr. W. H. Furman, for 28 years a resident of Cedar Rapids, Iowa, and during that time one of the most enterprising bee-keepers of Iowa, has taken up his residence in Dakota.

The Bacteria.

We have received a pamphlet of 65 pages, on this subject, by T. J. Burrill, Professor of Botany and Horticulture in the Illinois University. It is a very interesting treatise on the nature, organization, effects and classification of Bacteria. The following extracts from it will give a good idea of the subject matter:

"It is the object of this paper to present, in language freed as far as possible from technical terms, the principal and most interesting facts now known about these silent working denizens of the earth, the air, and the water."

"We swallow them with our food, and at least some kinds sometimes retain their activity in the somach and intestinal tube. It now seems certain that the latter is always inhabited by special kinds which have to do with the activities there in operation. In health the blood is usually quite free from them, but in certain diseases this too, as it rapidly courses through the arteries and veins, sweeps along in the current myriads of the minute but living and developing, ever active things, inappropriately called "germs."

"There is now, in certain cases, just as good evidence that bacteria cause diseases as there is that hawks destroy chickens, and the evidence is as inductively rigid in the one case as in the other."

We can supply it to any who may desire it at 50 cents.

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Virginia for Bee Culture.

It will be remembered that sometime since Mr. E. C. Jordan, at the White Sulphur Springs, Va., advised bee-keepers to try that locality before going further South or West. A correspondent wrote him for particulars, and the reply was sent us for publication, and we have made the following digest of the questions and answers:

Improved farms here are worth from $15 to $100 per acre; the main crops produced are wheat, corn, oats, hay, potatoes, fruits, vegetables, etc.; the soil is slate, and there are iron mines here; the Shenandoah Valley is not subject to droughts, and we have no malaria; all kinds of small fruits do first rate here; thousands of cattle, hogs and chickens are raised here, and are shipped to Baltimore, Washington Philadelphia and New York; the best of butter, cream and cheese are produced here; bees obtain surplus here from March to November, and our honey is marketed in Winchester, Washington, Baltimore, Philadelphia and *at home*, and sells at from 20 to 25 cents per pound.

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Advertisements intended for the Bee Journal must reach this office by Saturday of the previous week.

CORRESPONDENCE

Rural New Yorker.

The Influence of Food.

PROF. A. J. COOK.

We often hear farmers remark that food has more to do with fine stock than does pedigree. While we do not think this is true, yet we must confess that good feeding is no mean factor in successful stock breeding. Long and careful breeding, indexed by a valuable pedigree, insures susceptibility, which makes great results possible, but only with proper care. A 50-horse power engine possesses great potency, but on one-fourth rations of fuel it would accomplish less than a 10-horse power. Yet it would be foolish to argue that fuel was more important than the style of the engine.

Among higher animals we have no evidence that food produces rapid structural changes. Food, selection and time will change the form, carcass, and even the habits, but only after long years of modification. Among lower animals we have some startling facts that show most graphically that food is sometimes a most powerful agent, able to effect a radical structural change in a very brief time. We all know that, in the main, the animal functions are very similar, even though studied in animals which are structually wide apart. The now generally accepted philosophy that all animals have a common ancestry should lead us to give wise consideration to the peculiarities of lower animals, even in our treatment of the higher forms. If, then, we can show that food is potent to substantially modify the entire organism and life habits of bees, it should serve to exalt our estimate of its value and influence as affecting the higher animals. The same egg may, yea will, produce either a worker bee or a queen, the character of the progeny depending solely upon the character and quantity of the food consumed. If the food is rich and abundant the result is a queen bee. If it is less nourishing and stinted in quantity, a worker bee is the result. Even after the egg hatches, the young larva may be fed for three days in the meager way, then fed the richer food in ample supply, and a queen will result, though not so valuable a one as though fed the rich royal pablulum in generous quantities from the first.

Now, let us see what the changes are that are wrought by these improved good rations. The queen is longer and slimmer than the worker bees, and her ovaries are feebly developed, capable of growing daily from 2,000 to 3,000 eggs. On the other hand, there is a more feeble development of such organs as are used in procuring food and performing the various operations of the hive. Thus the queen has no pollen baskets, her jaws, as compared with those of the workers, are weak, her tongue short, and her glandular system and stomach are more fully developed. Thus a simple modification of the food regimen produces sterility in the workers, which are only sterile females, while the organs that are more intimately connected with nutrition are more strongly developed. It would seem that the food is too slight to stimulate the growth of the ovaries, which is appropriated in a more decided development of the special organs which minister to nutrition. If food can do all this with bees, it certainly may be regarded as a very important element in the development and care of our higher animals.

Lansing, Mich.

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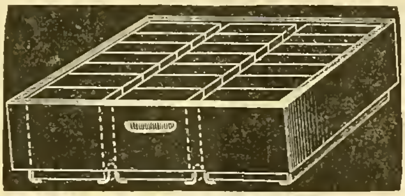
For the American Bee Journal.

Racks for Surplus Honey.

J. W. PORTER.

I notice some attempts are still being made to get over the difficulty I successfully accomplished years ago, and my plan was illustrated on page 240 of the BEE JOURNAL for 1878. Mr. Whitford's plan on page 56, I see is referred to by Mr. Heddon on page 95.

The purpose was to have a case that would be bee tight; one that could be readily tiered up (a point of great value here), and one that would hold the sections lengthwise of the hive (no other would do for me), and come right down on to the brood combs, with only bee space between sections and brood; one, too, that would admit of long separators of wood. All of these points are attained, and the continued use of this rack, for years, have been so satisfactory, that I think a real service will be done to republish the cut of it. It was freely contributed to the fraternity. I had experimented much, and have seen nearly all, including Mr. Heddon's latest; which, while it has some valuable points, is open to serious objections. Mr. Whitford's mistake is in making his T supports solid. Made of X or XX tin, and so bent as to have them thus ∩, standing ⅝ inch high, all the strength needed is obtained, and the space permits them to rest on a nail inserted at the apex.



Rack for Surplus Honey.

Mr. Heddon asks about bee space. The tin angles are flush with the bottom of the case, and the case rests on strips ⅞ wide, by ⅜ thick, placed one at each end, transversely across the brood frames, tight to the ends of the hive. Now, with this arrangement it matters not if the bees build wax bridges in bee space, prying between the case and transverse stick, separates all without displacing or lifting a comb below. They can be made to fit any hive. At one time I considered it a good advantage to use the deep, wide frame, with hanging separators, and with some bees. Much more can be done with them than with any case. Because of their use in Langstroth frames, I adopted the size of 4¼x5⅔x2 sections; six just fill the frame.

My cases are made to take 18 of them. The separators are notched to let down in the middle tins to bee depth. Five separators only to 18 sections, and each one movable, and of wood or tin may be used. I much prefer wood.

The T should be stamped not hammered. That is done by slitting an oak or hard wood block, strips of tin, 1⅞ inches wide, are cut and bent slightly into the slot. Then reversed and forced by a lever into the next slot, and they are finished in the shape of this U. An iron or steel square blade of equal thickness is used under the lever. Tinsmiths can form them, but false bends damage the strength greatly.

Charlottesville, Va., Feb., 17, 1883.

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Translated from Bienenvater by A. R. Kohnke.

Wax—Tests for Proving its Purity.

PROF. P. F. RESCH, S. J.

What is wax? To the uninitiated this may seem a very superfluous question; but the fact that there are a number of natural products going by that name, demands accurate determination of the kind. For instance, in some churches the ritual directions are to use wax candles at certain ceremonies; the ordinance also specifies of what kind of wax such candles must be made, viz.: "beeswax;" but that is as far as the ordinance specifies. Hence, it is customary to use the product of the native bee, in the different countries where such candles are used; in Europe, it is the common or German bee, or the Italian; in Syria, the Syrian; in Cyprus, the Cyprian; in the East Indies, *Apis dorsata, florea, Indica;* in South America, the species Gothuir, *Melipona*, which furnish the wax. It appears that the wax from all the different species of bees possesses the same chemical and physical properties.

For the sake of convenience it has been found necessary to classify wax under the following heads: Beeswax, vegetable wax, and animal wax. On comparing the elementary constituents of the different kinds, we find them to be composed of carbon (C), hydrogen (H), and oxygen (O) in the following average proportions:

Beeswax....	C, 81.70,	H, 13.26,	O, 5.04
Veg. wax...	C, 71.61,	H, 12.38,	O, 16.01
Min. wax...	C, 85,70,	H, 14.30,	O, 00.00

As beeswax, to a great extent, is adulterated, the discription of a few handy tests may not come amiss.

Pure beeswax has the following properties: At 30° C. it may be kneaded; between 69° and 70° C, it melts. Its specific gravity is between 0.960, 0.969. A higher or lower specific gravity indicate adulterations with foreign substances.

Pure wax, when melted, appears as a clear, slightly yellow liquid, and, if put into hot water, should not dissolve the same, nor leave any sediment. This is one of the most important tests, and in order to better observe changes of transparency, or a sediment, should be made in a test tube. But it does not follow that the wax is pure, if no discolored water or sediment is noticed; hence, we have to apply other tests.

Take a piece of caustic lime and slack it in about four times its bulk of water. After it has well slacked, and been well stirred, it must be filtered through filter paper, using a glass funnel for this purpose. Of the now clear lime water obtained, add some to the still molten wax, stirring it well all the time. If now the water becomes whitish or cloudy, or even a sediment is noticed, it indicates adulteration by stearic acid, which combines with the lime, forming an insoluble precipitate of stearate of lime.

A still more delicate test may be performed by dissolving some of the wax in ten times its weight of chloroform, and then adding some of the clear lime solution.

The above are the principal tests. To detect other impurities, which are added to increase the weight and bulk of the wax, but do not combine with it, will not be difficult, and will show themselves by melting the wax. The following substances have been found to be added, to increase the weight: Water, starch, phosphate of lime, sulphate of lime, carbonate of lime, ochre and sawdust.

To adulterate wax the following ingredients are used: Stearine, paraffine, tallow, ceresine (or ozokerit), galipot, and vegetable wax.

To detect water, it is necessary to submit quite a large quantity of the wax to the test of melting, and keeping it at the boiling point, for sometime, to evaporate the water, without burning the wax, of course. Any decrease in weight indicates an admixture of water, the amount of which may be determined by the scales. In the same manner, viz.: by melting, other impurities may be detected, as most, or all of them, will be found as a sediment, either in the wax on the side next to the water, or will even sink entirely to the bottom.

Tallow causes wax to feel fatty or greasy to the touch. One cannot write on such wax with a piece of chalk, while on pure wax it can be done. A little piece of such adulterated wax thrown on a red hot stove, or other iron or burning coals, will emit a heavy, very disagreeably-smelling smoke.

For paraffine, the test is as follows: Take a small piece of the wax, put it into a watch glass, and pour sulphuric acid on. Pure beeswax will be charred, and the paraffine remain without being changed. The same test is applicable with reference to any kind of mineral wax, as ozokerit or ceresine.

If pure wax is put into either, about half of it will be dissolved, whilst vegetable and mineral wax is entirely soluble in it; with this difference, that the latter, in part, forms jelly flakes. If wax, on being dissolved in either, loses more than half, it contains either vegetable or mineral wax.

Youngstown, O.

For the American Bee Journal.

Spring Management of Bees.

FAYETTE LEE.

I am located 60 miles west of St. Paul, on the Manitoba railroad. I have been in the bee business six years; the average yield, per colony, spring count, is 92 pounds. Our surplus honey is from basswood and golden rod. I do not claim that the way I manage bees is perfect, but by putting our experiences together we can learn something. When I first began keeping bees, I borrowed all the bee papers I could find, besides subscribing for three others.

I use a two-story hive with a loose bottom-board. I believe they are the best. I use the American hive, nine frames in each story. Early in April, I put the bees on their summer stands, and raised up every hive and cleaned the dead bees from the bottom board, and closed the entrances half an inch. The next thing is to know if they have honey. I take off the cover and roll back the quilt; if they have capped honey in sight, I close the hive and mark it: "honey for ten days." All hives not having honey in sight, I mark, "short of honey." Beginners should not open a hive when bees need feeding, and tear out all of the frames to see the queen, or ascertain if they have brood. The way I handle weak colonies is: I only take out one frame of comb, just as close to the brood as possible, and in its place I put a frame of honey from some heavy hive, or fill a comb with honey, or syrup made from sugar.

Careless handling is the cause of weak colonies swarming out in early spring; you disturb the bees and queen by handling the brood combs too much; it causes robbing, and out they go, to be killed by trying to enter other hives; tuck them up, warm, till there is plenty of honey and pollen coming in, and then it will do no harm to handle the combs, or look for the queen. I get all the brood possible by the time that fruit and dandelions bloom; by spreading the brood in strong colonies, and taking out now and then a frame of brood, to build up the weak ones. The best moth-trap is a few young turkeys or a pair of ducks; try them and see. As the bees get strong, give them wider entances; it will not pay to unite weak colonies in early spring; do not think, because they are weak, that the queen is poor; give them brood and bees, and you will see plenty of eggs in a short time.

Early in May I want every hive full of brood, in order to get a large yield of honey from every hive, and a good increase. I want nine frames of brood in every hive by May 25; and the way to get it done is by spreading the brood combs. I take the outside comb and put it in the centre of the brood-nest; I do this every seven days, until I get nine full of brood. I handle the brood very carefully. In April I have all hives full of brood. If honey is coming in, I get some swarms in May and June, but more in July. I put on the top-story as early as June 1. I have surplus combs in the top story, from the last season, and what I lack is filled by frames of foundation. The increase that gives me the most honey is one swarm from two. I put one frame of brood in the upper story, when I put it on; this causes the bees to go up there to work. I save the queen-cells from the first colony that gives a swarm. In seven days after, I take out all but one frame, and make as many nuclei as I have cells, and take two frames of brood and put with them from other hives. I do this every six days until they are full of brood; as fast as they swarm I return them to their own hive, and take three frames of brood from them, give them a new location, put the three frames of brood in an empty hive, and put it on the old stand. In this way I keep all strong colonies by adding brood. I do not like too much swarming in July; it spoils the honey harvest. By returning them, giving them a new location, and removing some brood, I keep them just where they will give us a large yield of honey. June swarms always pay me best. A swarm will fill its hive with comb in two weeks in June.

Cokato, Minn.

For the American Bee Journal.

Are Half-Pound Sections Desirable?

E. N. WOOD.

As much has been said about the size of sections, I have taken some pains to find out how our bee-keeping friends felt about the matter, in this section of the country, and I have not heard from one that favors the half-pound section, from parties that have a home market for all their product. We all ought to strive to hold to the present sizes of boxes and hives, as changes mean great expense and trouble. It seems to me that a general change in the size of honey boxes will soon bring new styles of hives that will be supposed to be better adapted to the use of the new box, and these new styles will catch many who are young in the pursuit, and as first impressions are strong, many of them would never change; many more sizes would be added to our now standard sizes of hives, frames and boxes. There are four general or standard sizes of boxes, 4¼x4¼, 5¼x5¼, 5½x5½, 5¼x6¼. The few sizes of boxes now in use has enabled the manufacturers to bring the prices down to the present very low rates, as they make large quantities of each size at a time, whereas, if the half-pound section comes into general use, I think the prices of them all would be somewhat higher than at present; for get the craze (if I may so call it) once started and it will sweep over the country, and nearly every bee-keeper, no matter what the size his hive may be, will think he must come to the half-pound section as near as possible, and there would be as many sizes of half-pound boxes as there are different sizes of hives at present, and I fear more, as some would reduce their boxes in one way and some in another.

I think, perhaps, for a season or so, the half-pound sections may take well in the market, it being new, and somewhat of a novelty, but it will become a drug upon the market and be driven out of use, to the sorrow of those that have made expensive changes.

Again, I think one-pound is as small a quantity as most people want to buy. It is about the right size to put upon a plate without cutting in two, and if a pound or more of honey is to be bought they would certainly pass by the half-pound lots (for they have the appearance of too much tare) to the 1, 1½ and 2-pound boxes, and, again, I am afraid we cannot get near as large a yield per hive with these small boxes. Let us hear something of this from those that have used them.

North Lansing, Mich.

For the American Bee Journal.

Queens Reared in the South.

THOS. C. DAVIES.

On page 182 of the JOURNAL for April 4, Mr. T. S. Johnson, of Bogart, O., asks Mr. G. M. Doolittle and "any others who have had experience with Southern queens, if he thinks bees from a queen reared in the South are as hardy and well able to stand the long, cold winters of the North, as those from a queen reared here?" Being one of the "others" who have had some experience with Southern queens, I would like to give the following details:

In April of last year I received a dollar-queen from a Southern breeder, and in a few weeks after, a selected tested queen from the same person. I also received a selected tested queen, and a Syrian queen from a New York breeder. From those two selected queens, several fine queens were reared during July and August, and when preparing my bees for the winter, my queens were as follows: Two from the South, two from the State of New York, and 24 reared at home. Several of those were reared the season before the last, and one of them was reared in July, 1879. She had been such an excellent queen, that I had not courage enough to kill her last fall, and she was allowed to live as long as she could. About three weeks ago she died, I suppose of old age.

Twenty of those, including the two from the South, and the selected one from New York, were wintered on their summer stands, well packed in chaff. On April 3, they were all examined, and the two from the South had their hives well stocked with bees and brood, and fully equal to the one from New York. In fact, those 20 colonies, except one, have wintered admirably, and they are now so equal that I cannot tell which of them is the best.

Of the 8 in the cellar, 6 came through well, but the other two are rather weak, and queenless. One of the queens died last week, and the other, three weeks ago. I united these two, and have sent to the Southern breeder, four days ago, for a queen to give them.

I do not know what has been the experience of others with Southern queens, except that of Mr. Doolittle's with his Texan queen, but I must say that I am well pleased with them so far. I believe with Mr. Doolittle, that "there is a difference in bees about wintering," but can hardly believe, at present, that it is due to the part of the country where they are reared. I sincerely hope that the bee-masters, by "studying and experimenting," will succeed in getting more light on this inequality of different colonies regarding wintering, before another cold winter comes.

Pittsburgh, Pa., April 11, 1883.

For the American Bee Journal.

Bee-Keeping in Florida.

C. H. LAKE.

As many bee-keepers throughout the country are turning their attention to this State, and being in communication with several prominent bee-keepers already located there, through whom I have gathered the information herein contained. I give it, thinking it might be of service to those about to locate there. For the past three years I have been thinking of removing there permanently, owing to the fact I am of a consumptive family, and suffer extremely with lung difficulty, especially in cold winters in this latitude.

There is a belt of country along the east coast, rightly termed the "Bee Belt." Ten years ago bee-keeping was an unknown industry there, and scarcely a dozen colonies could be found among the few families who then inhabited that portion of Florida. This "belt" commences about opposite Port Orange, extending South as far as Oak Hill, a distance of 125 miles, or thereabout.

Thousands upon thousands of acres of marsh are there covered with the black mangrove, the best and greatest honey producing plant known in Florida. Within this radius the black mangrove predominates, while above the head of Indian river, the red mangrove grows almost exclusively, which, I believe, is not a honey-producing shrub.

This "belt" offers superior inducements to bee-keepers, and when the fact becomes known, bee men will not be backward in availing themselves of the opportunity, by moving in and locating at favorable points. From recent letters from Mr. O. Olson, of New Smyrna, who is, without doubt, the most experienced and successful apiarist in Florida, making bee-keeping his exclusive business, he informs me that it is "impossible to overstock the country." Mr. Olson makes the study of honey-producing flowers a portion of his business, and from "careful microscopic examination of the flowers of the black mangrove," he finds they contain "one-fourth of a drop of honey." When it is taken into consideration that this shrub bears thousands upon thousands of blossoms each season, one can get some idea as to its honey-producing qualities. It is asserted that 90 per cent. of the surplus honey gathered during the season (which lasts usually about ten weeks), is from black mangrove. While there are a great variety of the other honey-producing flowers, blooming at different periods throughout the year, among which can be enumerated the "saw and cabbage palmetto, gallberries, sweet bay, wild sunflowers, yellow jessamine, golden rod, orange bloom, snow vine, basswood, sweet gum, etc., etc." There is no reason why the honey cannot be gathered. With all these natural requisites of building up the colonies to perfection, by the time when the mangrove season opens.

There seems to be a great diversity of opinion among the Florida apiarists in regard to the cabbage palmetto. Some assert that "the bees neither gather honey or pollen from its bloom," while others are equally confident that "it equals in every respect the mangrove, as a honey producer;" while others affirm that "it yields pollen only." Different situations probably accounts for the varied results, like many of our own honey-producing shrubs, trees, etc.

Florida has its disadvantages, like all other great honey-producing States, and will, till the tide of immigration is sufficient to establish railroads and water conveyances. New Smyrna is 125 miles from the nearest express office, and for transportation the inhabitants have to "depend on schooners along the coast." A small steamer has been put on between Jacksonville and New Smyrna, for the winter, but is taken off in the spring; this steamer makes one trip a week, but all this will be removed as soon as business springs up, and the country becomes more settled.

Besides "being out of the world," we have the bear, dragon fly, several bee birds, and scores of other enemies to the bee to contend with, and, for that reason alone, we wish the entire country was settled up, while the bee moth reigns supreme, which is owing to the fact that what bees were kept by the old inhabitants, were in the old "gum or moth harbor."

A few more interesting items may not be amiss. W. S. Hart, of Hawks Park, has nearly 100 colonies of bees, and has the best out-fit, consisting of the improved machinery for carrying on the business, foundation machine, evaporating machinery, etc., that there is in Florida.

A. J. Packwood has started with 20

colonies, and has, during last season, taken several thousand lbs. of honey.

H. Olson and Mr. Wilson, from Ohio, seven miles south of New Smyrna, have 184 colonies, the largest apiary in Florida. They make bee-keeping their sole occupation, and are supplied with machinery for the manufacture of hives and everything pertaining to them, and work up an immense amount of lumber during the year. Their bees are mostly Italians, with some hybrids and a few blacks. This seasons crop foots up 25,800 pounds of the best honey we ever sampled.

In regard to the quality of Florida honey, Mr. C. F. Muth, of Cincinnati, who has handled most of the crop produced by these gentlemen, says "he considers their honey the finest *ever placed on the market*, and that it sells more readily than the white clover honey of the North."

L. H. Bivens, of Glencoe, has 37 colonies, and has shipped, this year, 2,000 pounds. M. B. Rolfe, also of Glencoe, has 8, which has produced 600 pounds.

R. S. Sheldon is one of our oldest bee-keepers. He has, for years past, shipped thousands of pounds of excellent honey, and last year his success was very satisfactory. In the spring he had 53 colonies, increased by artificial swarming to 84, and took thus far, Oct. 1, 6,300 pounds. From a natural swarm hived April 15, 328½ were taken, up to Aug. 15.

Mr. Morrison Lewis, of New Smyrna, is the pioneer in bee-keeping in Florida; that is, he was the first to make bee-keeping pay. He commenced in 1868 with one wild swarm, which he found in the woods, which did finely, increasing to several colonies, besides producing a large amount of honey, the second year, which showed Mr. L. what they were capable of doing, when properly cared for. He received 25 to 30 cents per pound for all his honey, for some eight years. He introduced the first movable comb hive and the first honey extractor into the State, and shipped the first barrel of honey, gathered in Florida, to New York, in 1876. From his 30 colonies, he has shipped, up to Oct. 1, 1882, over 3,000 pounds.

From a private letter received recently from Mr. O. Olson, he states: "I made six swarms from one colony, this season, and took from the old colony 440 pounds of extracted honey. I have, at last, found a climate where I like to stay, in spite of all the insects, which is a great drawback on this coast during June, July and August. A more pleasant and healthy climate cannot be found on earth, and I have lived in Europe and several of the States of America. Smyrna is a place of twelve families, and six miles distant, are twelve more."

I could continue this article to a greater length, but have given the important information sought after by those thinking of going into the business, in Florida. Any further information will be cheerfully given as far as in my power, or by addressing any of the above named gentlemen.

Baltimore, Md., Feb. 12, 1883.

For the American Bee Journal.

Experienced Students of Apiculture.

JESSE OREN.

I cannot see the force of the objections made by Mr. Heddon, page 73, against the views advanced by Dr. Besse in his "advanced step," in recommending diplomas to be given by the North American Apiarian College. It seems to me that Dr. Besse requires of the applicant for honors all that Mr. Heddon requires, and a little more. Mr. Heddon's diploma and "red tape circumlocution," as he calls it, would pass current with the society, and entitle the young man to an examination. Dr. Besse demands an experience of one year in all the manipulations of the apiary. Mr. Heddon, five months, or a bee year, if you please so to call it. Both men are on the same plane in this period of preparation. If Mr. Heddon was one of the examining committee, as he probably would be, and his line of students, with their "red tape," signed "Get there Success," should file into line before the committee, would he not approve them? Would he protest against Dr. Miller's, Doolittle's, Dadant's, Jones', Dr. Besse's, Grimm's "Get there Success?" We believe he would admit all the names to his *ad eundem* list of red tape. They are all well known to the bee world. I am glad they are known, and that they have spoken out. Red tape from any of them would pass a young man into my yard. Still I should prefer the combined red tape of all as being better than of any one alone. One might be all extracted, the other all comb, and half-pound sections at that, too. I might be suited with a mixed husbandry.

Some men are born poets, and must sing; others are born mutes, and cannot sing. There is this difference, also, among bee men. Some few miles from me lives a man who has been "getting there annually" with his 15,000 to 2,000 pounds of honey. He is a local phenomenon, and only known at home. His name is "Get there Success;" but the North American Society knows nothing of him. He has paid $100 per month for an apiarian assistant; and any red tape he should adopt would pass the owner into my yard as competent. We do not want a private monopoly of red tape, but rather, a good supply from every part of the country. In this way, many who are mutes, will come out of their holes and hold up their hands to be seen.

We hold that red tape does mean something; and that if Mr. Heddon has any, he is proud of it, and would not readily part with it. A graduate of Yale or of Ann Arbor does not imply an illiterate person by any means, but, on the contrary, such graduation is *prima facie* evidence of scholarship, the United States over. We do not expect to make such men as Sir Isaac Newton, Kepler and Leverrier by diplomas, nor, perhaps, such apiarist as Mr. Heddon either; yet this admission does not diminish the signification of diplomas. We are friendly to Dr. Besse's "advance step," and believe the Society will so look upon the matter, when it meets in Toronto, next autumn. I have just given Mr. Heddon's and Mr. Jones' address to a young man who wishes to learn our business. I have given him a hope that he may be able to meet us at Toronto and pass examination next autumn. With the hope of success, he is going to work the ensuing summer. But like many lawyers and doctors, he may graduate and afterwards make an honorable living hauling manure and digging potatoes.

La Porte City, Iowa.

For the American Bee Journal.

Haldimand Bee-Keepers' Association

The Haldimand Bee-Keepers' Association held its third meeting on Saturday, March 31, at Nelles' Corners, Ontario, pursuant to adjournment.

Members present, E. DeCew, President; and Messrs. James Armstrong, R. Buckley, Robt. Coverdale, Ephraim Gee, Wm. Abbott, Joseph Carter, Fred. Mehenbacher, E. C. Campbell, R. Anguish, Ambrose Gloyd, James Gloyd, William Harrison, A. Vanderbugh, Wm. Kindree, David Byers, Henry Smith, Elijah Kindree, R. W. Beam, David Anguish.

Minutes of previous meeting read and approved.

The president gave a short address, after which the first question was taken up.

Two Story Hives.—Mr. Armstrong said it depended on the depth of frames; if the frames were shallow, two stories were an advantage; if deep, one story or 1½ stories was about the right thing. Mr. Buckley thought that when extracting, a double story was not necessary.

The Desirable Style of Hive Cover.—The president exhibited one which met with the approval of the members. It was very similar to those now used by D. A. Jones, and is deep enough to allow for a chaff cushion in winter.

Bottom Boards—Caused considerable discussion. A number of members favoring loose bottoms; others preferring tight bottoms; the majority being in favor of the latter.

Spring Feeding.—The president said the best plan of spring feeding, was that of D. A. Jones, and explained how it should be made. Mr. Byers advocated feeding syrup strained through a cloth; it had worked well. Mr. Vanderburgh thought the best plan of spring feeding was to feed in the fall. Mr. Buckley gave his plan, viz: making a syrup of sugar and flour, pouring it into an empty frame, and putting it in the hive between the cluster. The secretary recommended linseed-cake meal as one of the best substitutes for pollen.

Is it Best that Bees Should Swarm?—Mr. Vanderburgh advocating dividing, as did Messrs. Armstrong and Buckley, and recommended having queens on hand for new colonies. Mr. Kindree thought if the object was to increase, natural swarming was best; if for honey, dividing was best. The majority gave their opinion in favor of artificial swarming. Messrs. Wm Kindree and Wm. Abbott gave their plans for securing swarms.

How to Rear Good Queens.—Mr. Armstrong preferred rearing queens in a full colony, on full sized frames, and explained his method at some length.

How to Introduce Queens.—Mr. Armstrong recomemded the Peet cage, keeping the queen confined until the bees became reconciled to her. The secretary mentioned the plan adopted by Mr. Simmins, of England, who introduced the queen on a frame of bees, with good success.

How to Secure Comb Honey.—Mr. Buckley advocated the use of metal division-boards and section boxes, in the body of the hive. Mr. Gloyd also spoke in favor of that plan, and said it was recommended by prominent bee-keepers. Mr. Kindree was in favor of section boxes in the upper story, leaving the lower story undisturbed.

Register of Each Hive—Its Value.—The president recommended the use of a register for each hive, so that he could tell the condition of his hives without the trouble of examining them every day.

Books and Periodicals.—The secretary advocated the reading of books and periodicals devoted to bee-culture, and thought no progressive bee-keeper should be without one or more good bee papers. In one number of the AMERICAN BEE JOURNAL he had obtained information worth more than the subscription price for a whole year.

Moved by Mr. Armstrong, seconded by Mr. Campbell, that each bee-keeper give a correct report of the number of colonies kept, and the number of pounds of comb and extracted honey from each colony, and what kind of bees.

It was resolved that the next meeting be held on June 16, at 10 a. m., at Cheapside, Ont.

The following statement will show the loses sustained during the past winter:

	Nov. 1882.	April 1883.
Edmund DeCew,	15	5
Robert Buckley,	38	33
James Armstrong,	32	31
Wm. Harrison,	2	2
Ambrose Gloyd,	16	15
Wm. Jack,	8	4
Joseph Carter,	10	9
Robert Coverdale,	6	5
R. W. Beam.	12	9
Wm. Kindree,	15	14
Henry Smith,	2	2
A. Vanderburgh,	9	9
F. Mehlenbacher,	1	1
David Byers,	13	12
Robert Anguish,	37	25
Ephraim Gee,	1	1
E. C. Campbell,	35	32
David Anguish,	4	3
Daniel Rose,	15	7

E. C. CAMPRELL, *Sec.*

P. S. By the above table it will be seen that the loses during the past severe winter have not been very high, and was caused principally by want of stores. I took mine out of cellar April 9, having been confined for over five months, without a flight. Three colonies were dead for want of stores; the rest are in good condition, with the exception of two or three, affected with dysentery.—E. C.

For the American Bee Journal.

Remarks on Various Matters.

J. O. SHEARMAN.

The wintering problem seems to be pretty well worn; but not finally settled yet. My hobby has been packing in chaff, in which way I have been ordinarily successful. I wintered over 100 colonies, last winter and this, without the loss of a colony so far. I had all of my weakest colonies in the cellar, including some that were intended for doubling up; but the weak and strong all seemed to stand, in the cellar, about alike, except a weak one that had the dysentery; an examination showed that they had only uncapped honey left, though they had sealed honey in the fall. Also two nuclei, with reserved queens, starved. The temperature of the cellar was as near to freezing as I could keep it; it was below only once. I found that when the thermometer indicated near 40° (as often advised through the papers), they would become uneasy. I had only 27 in cellar. Those out of doors, packed in chaff, did well, so far, set close to the ground, on a little bed of straw, for under packing. That goes to show that it is not quite sure death.

I once thought that I had a good thing on them, if only they were covered by snow, and said the deeper the snow the better, with a sloping board over the entrance, of course; but now I have got bravely over that. The winter of 1880-81 was our test on that point. Those deep under the snow were very uneasy, while others situated on the south side of a hill, where the wind blew the snow all away from the front of the hives, came out bright, strong and healthy. That was a damp confinement, while, this winter, though snowed under, 2 feet or more, they came out nearly dry, with much better results. My conclusions are that a number of causes may induce dysentery: 1. Extreme changes of temperature, particularly if damp. 2. Thin honey, more especially if soured by changes of temperature. 3. Long confinement, if in conjunction with either or both of the above unfavorable conditions. 4. Undue breeding while confined, or anything that disturbs them while unable to fly.

On the half-pound sections, my advice is to put a variety of packages upon the market, to supply all kinds of customers; the half-pounds are well enough for part of the supply, but if all the honey was put up that way, it would be no higher in price than if all were in one-pound packages. The novelty helps the price at first.

During the past season I increased only from 90 to 107 colonies; though it was a noted season for swarming, for over two months. I did it, partly, by putting one swarm into another hive, from which a swarm had lately issued, increasing the surplus room; and partly, before they got so feverish, by gradual extension of the brood-chamber; at the same time, giving more surplus room. The hive I use enables me to do the latter more readily, as the back of the brood-chamber is movable, the same as a division-board, and I can set them to work in three old-fashioned boxes, with two brood frames, or use 18 of the same sized boxes on the top of 12 brood frames.

I have run 12 colonies all through an entire season without swarming, increasing them to 18 by division, and giving them plenty of surplus room. That was four years ago, in a fast-swarming season; but it takes too much time for a large stock to increase a little at a time.

I had the above mentioned 12 colonies in a location where they gathered plenty of the red raspberry honey, while it was too wet for them to do much on the white clover. It was of very fine quality and flavor, though not so light in color as the white clover honey.

New Richmond, Mich., Mar. 6, 1883.

For the American Bee Journal.

Water for Bees in Winter.

EUGENE SECOR.

I suppose some of our Southern brethren, who have been basking in the sunshine for two months, and whose bees have been "out to pasture" so long that they have forgotten the past winter, will shrug their shoulders and thank God that they do not live in this borean land, when we tell them that we are just taking our hives to their summer stands. Well, I suppose the South is a delightful place to live in, but I have yet to learn that they accomplish more in any of the departments of industry during their long summers, than we in the North do in our short ones. A small portion of Texas came to the front last year in the production of honey, but year by year, the North supplies our leading honey markets, with as fine a quality as can be found this side of California. So, while we can successfully compete with them in the production of honey, perhaps we ought not to be so modest in discussing the wintering problems, which, undoubtedly is anything but interesting reading to them.

I have, to-day, taken my bees from the cellar, where they have been since Nov. 13. The last flight they had last fall, was on Nov. 10. This is the longest period I have ever kept them confined without a flight. My experience, to-day, seems to indicate that they could have endured a much longer night. I never before saw bees so cross in the spring. They are usually so glad to get out and fly, to void their feces, that they did not attempt to sting; but, to-day, I was compelled to don bee-vail and gloves, and, in spite of both, I am now far from "spring poor." There are no signs of dysentery. They did not "spot" their hives during the winter, nor anything around the yard, in their flight to-day. My cellar was perfectly dark, without any ventilation, and ranged, in temperature, during the winter, from 32° to 48°, usually standing at about 45°. It was quite dry. From March 1, I have, several times, watered a part of them, a thing that I never practiced before, but it had the effect to keep them more quiet, and many of them were "just booming" to-day.

Now as to the results: One colony had starved to death. Four out of six, that were on the bottom tier, one foot from the cellar bottom, that had not been uncovered since putting in, and that had had no water, were dead. Only in one hive were the combs moldy, and all had sufficient stores. Those colonies which had been watered since March 1, were strong and healthy, and began to rob in less than an hour after having been set out.

Soft maples, willows, cotton woods, and elms are in bloom. The prairie anemones have been out for some days. The past winter has been one of the coldest known since the early settlement of the State. For about nine weeks from the 20th of December, it hardly thawed on the south side of the house, and the mercury hugged the zero point most of the time, occasionally dropping down to call on numbers 35 and 40. And for fully three months it was too cold for even a healthy bee to venture far from the warmth of the cluster. Fruit trees, in many parts of the State, have been injured; though in this locality we have not suffered in that respect. Bees have also wintered usually well.

Forest City, Iowa, April 16, 1883.

For the American Bee Journal.

Are Bees Taxable?

JESSE OREN.

Mr. Editor:—On page 42 of the Bee Journal for 1883, you are asked, "Are bees taxable?" Your answer, as given, is in accordance with the facts; but your conclusion is wrong, viz.: property of value is taxable property in Iowa. The statute of a State fixes and names the kinds of property on which a revenue shall be raised. In Iowa, bees are exempt by statute, and about all your patrons here are anxious that you shall so answer. Of course I know that it is not reasonable to expect you to know the laws, etc., of all the States. I have made this matter a special study years ago, and the matter was determined by the Attorney General about 15 years ago, when a special bill was got up by a member of the Legislature, exempting bees, etc. He said that bees were already exempt. But year after year we put in assessors and boards of supervisors who are ignorant of the law, and who reason that all property ought to bear its share of the public burden—good reasoning—but not Iowa law. But who knows any better than you do that the average assessor's judgment as to the value of a colony of bees on the first day of January is a very poor judgment. He cannot set true values. Enclosed you will find a spicy digest of the subject written by a lawyer of Black Hawk County, Iowa. He had my assistance in the matter. We must, however, fight the battle over and over, year after year. The question is not, "Should bees be taxed in Iowa?" but, "Are bees taxable under our laws?" Please, hereafter, when asked that question, answer, "Not by the laws of Iowa, etc." The Bee Journal, with that answer, will become notorious property, and will be preserved for the eye of the new assessor.

La Porte City, Iowa, Feb. 5, 1883.

ARE BEES TAXABLE?

Mr. Editor:—Allow me to ask yourself and readers why it was that the board of supervisors of Black Hawk County, on Friday, Jan. 10, adopted Mr. Jenney's classification of taxable property for the year 1879, without first revising it so as to make it legal? I trust that they acted conscientiously in the matter. But will you please, or will somebody please, explain how and where they got their authority for placing bees upon that list? Perhaps our board did not know that they were exempt from taxation in Iowa? Perhaps they have some authority unknown to outsiders? Will somebody please rise and explain?

Now, Mr. Editor, "let us reason together," and see if we can find a little law which is, and ought to be plain, to every reasonable being, at least after it has been pointed out to them. I believe I can show by statute that bees are as plainly exempt as if they had been written in gilt letters at the head of the chapter of exempt property. First, what are bees? Are they vegetables? Are they minerals? Or, are they animals? To which of these kingdoms do they belong? Of course, you and everybody else will say that they are animals, of the insect order. Now, since they are animals, then, as animals, they are twice exempt under the statute. Exempt from taxation, first, by section 797 and 801 of Code of Iowa, 1873. Section 797, division 4, exempts from taxation "animals not hereafter specified." Section 801 enumerates the animals, viz.: "Horses, cattle, mules, asses, sheep, swine." Now, we see that it does not mention bees, nor does it intend for bees to be listed, or it would have mentioned them. At a glance we can see that to have mentioned all the animals exempt would have been an endless task, and when completed would have been a volume of itself, and only merited our ridicule. It might have read like this, viz.: From the animal kingdom there shall be exempt 20 species of the quadrumania, viz.: The buffalo, the elk, the deer, the cat, the dog, the mouse, etc. Of cetacea species, the oyster, the clam, etc. Of birds, the wren, the robin, the swallow, etc. Of reptiles, the lizzard, the garter snake, the bull snake, etc. Of insects—30 species—viz.: The hornet, the wasp, the asp, the bee, the bumble bee, and so on, *ad infinitum*. But the cobracopella, the rattlesnake, the grizzly bear, the parrot, the seal, the golden fly of South America, owing to the vast amount of money invested in them for show purposes, shall be listed and taxed at twice their appraised value. Such might have been the form of the section had the Legislature attempted it. But they chose a wiser plan, and only enumerated those animals which were to be taxed, and exempted by section 797 all others—bees with the rest.

Again, according to Langstroth and other standard authority, the average life of a working bee, in summer season, is only six weeks, while it is a mooted question whether any worker ever lives to so great an age as seven months. Now, a bee being an animal, under section 821 (last clause), under "classification of property" for taxation, we find that "no entry shall be made on said books of any animal under the age of one year, except swine." The queen-bee is the only bee which lives to so great an age as one year. Her market value is 75 cents, and thousands are annually sold to A. I. Root, of Medina, O., at that price. We find by this section (821) that bees are again exempt. "Well," say some, "it is not the bee, it is the value." To this we again fall back on section 797, where we find "farm produce harvested within one year previous to the listing thereof," is exempt from taxation; and since all that is valuable in a colony of bees, except the 75 cent queen-bee, is harvested "within a year previous to the listing thereof," and comes in exempt along with thousands of bushels of wheat which the farmer may have in his granery or stack, the thousands, yes millions of dollars worth of wearing apparel, including valuable household furniture, thousands of dollars invested in swine under six months old, calves, colts, chickens, and the like, even down to a $5,000 shawl, such as Mrs. L—— is said to wear, and other articles of a wardrobe proportionately expensive. From the list of exempt property, it is plain to be seen that it is not the intent of our law to tax all valuable property, for if it did, why exempt so many millions of valuables? In conclusion I would say that I have not talked with any lawyer, who, after a little reference, did not see the exempt condition of bees under our law. I might refer to Clark & Curtis, of Lemars, Ordway, of Waterloo, Judge Gilchrist, of Vinton, the two law firms in our own city, viz.: Bishop & Sharon and Chas. Bishop, and many others whose names I will not occupy time and space to enumerate.

Now, Mr. Editor, please excuse this space-consuming article, as my object in penning this is to aid in the support of the Constitution of the United States and the laws of the State of Iowa. S. A. O.

[We are very glad to make the correction requested. Certainly, on this showing, in Iowa, bees are *not* taxable property.—Ed.]

SELECTIONS FROM OUR LETTER BOX

Are Bees Taxable in Iowa?

Will you please state whether the laws of Iowa exempt bees from taxation? All agree here that if bees are animals they are then exempt. Some think they are insects.

PETER S. TRIEM.

Mt. Auburn, Iowa.

[We are informed that the Attorney General, some 15 years ago, decided that in Iowa bees are not taxable, and according to the laws of that State, they are not assessable. Apiarists in Iowa should show this to the new assessors.—ED.]

Honey Flow in Louisiana.

There has been a fine flow of honey; the bees are in splendid condition. I have been running for increase, and yet from 100 colonies I have taken 3,500 pounds of good honey. I shall start for the North about April 25, with a lot of colonies.

E. T. FLANAGAN.

Kenner. La., April 16, 1883.

A Beginner's Experience.

My father kept bees as long ago as I can remember, and I was always fond of them. About 5 years ago, I and a neighbor procured about a dozen each, and as we had heard of the new way of dividing, we divided them again and again, expecting to get rich in that way, but the winter cleaned us out of the bee business. Taking the advice of a friend, I subscribed for the BEE JOURNAL and bought Cook's Manual, and concluded to try again, after learning more about bees. I sold enough honey to pay for my bees, and all that I had over spent on them, and still have the bees left. They are in good condition now, and will be ready for the harvest when it comes.

Casey. Ill. D. R. ROSEBROUGH.

Wintering Bees, etc.

As dry sawdust is hard to get in the fall, I procured it dry, after harvest, and had plenty in the fall. I have tried chaff with success, but do not want it any more; it harbors mice, and gets damp very quickly. I must either clip the queen's wings or run a great risk of my neck, so I choose the former. I like a deeper frame than the Langstroth, for Canada. I want my frames crosswise; I think a division-board as needful as the hives. I use an outside box about 6 inches larger than the hive, with the entrance bridged, and packed around and on top (with movable side), pressed tight on sawdust. In frosty mornings, in the fall, I remove all outside combs, which can be done very fast, and feed up, on from 5 to 7 frames. Where do bees cluster in the fall and winter? Below the honey; the only place for them, and just where they should, to give heat for sealing; they have warm honey all winter. I have yet to lose the first good colony prepared in the above manner. I have no carrying to do, in the spring, and bees are packed all the spring, and are not coaxed out, with every sunbeam, to get lost. Two colonies starved, in Langstroth hives, with honey in the hive; sometimes bees cluster in the centre, and getting to the end of the frames in a cold spell, they will starve with honey at the other end. Some of my bees have not flown for 147 days; neither do they seem to want to They are in excellent condition, with about 5 inches of sawdust on the top. For such a terrible winter, bees that are packed have wintered well. My experience will not agree with that of Prof. Cook, as stated on page 85 of his Manual. In every case, with me, the field bees have decided what shall be done. Last summer I found them keeping the queen from drone cells, and even using violence to stop her from laying drone eggs. I learn from them as to whether there should be a second swarm or not.

CHAS. MITCHELL.

Molesworth, Ont., April 9, 1883.

Willows for Pollen.

I send a shoot taken from a bush or tree, for identification. I find it literally covered with bees, for the sake of the profusion of its pollen. I can liken their labors upon it to nothing else except what we have all witnessed at the rye meal basket. I take it to be a species of the willow, of which Dr. Barrett (1850) enumerated 100 species growing in North America.

WM. S. BARCLAY.

Beaver, Pa., April 17, 1883.

[It is one of the willow family, as you have surmized.—ED.]

My Experience With Bees.

I have had bees for more than 30 years, but never paid much attention to them until the spring of 1879, when I concluded to give them my attention (having quit active business), and to that end, I procured a book on the subject, read the science up, and thought I was master of the situation. Having 5 colonies of black bees I divided them according to instructions in King's Text Book, and succeeded beyond my expectations; in the fall I found myself possessed of 10 colonies in good condition for winter, and got some surplus honey. I put them in the cellar, and they came out all right in the spring of 1880. I again divided and had 20 in the fall, and got a small amount of surplus; all being heavy and in good condition for winter, I thought I would try out-door packing, and packed 10 in oat straw and chaff (after Mr. Heddon's plan), and 10 put in the cellar. March being so pleasant I set set them all out, and unpacked those that were out, all being in good condition, so far as I could see; but April and part of May being wet, cold and windy, they commenced to die off very rapidly, leaving nice clean combs full of honey, so by the middle of May I had but one weak colony left, which died in the fall, after all my nursing. With over 100 frames full, or partly full of honey, I concluded to try it again, and bought 12 colonies, part hybrids and part blacks, and got one colony from Mr. King, of New York. Increased them to 26, and got 335 lbs. of box honey, which I sold at 20 cents per pound, which paid for the 12 colonies bought. I put them away for the winter, packed in the summer stands, as before, all in good condition. They came out in the spring of 1882 without the loss of a single colony. Expecting big things, I bought $47 worth of supplies, and increased my stock to 48, by my former method a little modified. Upon examination Oct. 1, I found them nearly all short of winter stores, some not having 5 lbs. of honey, and I got no surplus, except from one colony, and that gave me about 25 lbs. of inferior honey. I did not like to see them die, if I could help it, so I bought two barrels of coffee A sugar, and made it into syrup and fed them, so they averaged in weight from 18 to 30 lbs. I have packed them in plainer shavings. I suppose there never was a worse season for honey in our county before.

WM. B. MCCORMICK.

Uniontown, Pa.

Queen Nursery, Observing Hives, Etc.

Please answer the following questions in the BEE JOURNAL:

1. Seeing that queen nurseries are required for the purpose of having a supply on all occasions when needed, and few bees can be spared for such nurseries, how are they to be protected through the winter; it being necessay to have them strong to keep up heat for winter protection? As high a temperature being as necessary for a weak colony as a strong one, and the natural heat will not be sufficient, how is more heat to be created? I have never seen anything giving instructions on this subject, although Prof. Cook so strongly urges rearing queens.

2. In the observatory hive, as described by Prof. Cook, page 113 of the present volume of the BEE JOURNAL, which, of course, is intended to be in the house, study, or some such place, should not the alighting board be at an open window, for the egress and ingress of the bees, to prevent them coming into the room, where it is desired to see them? I suppose that, during the winter season, the observatory hive may become a queen nursery.

3. What plan must be taken to stimulate late breeding, as urged in Cook's Manual? He gives the advice, but not the information which is necessary to many; in fact to all who have not had the experience in that way. If the bees have plenty of honey, is there something else better for that purpose? EDWARD MOORE.

Barrie, Ont.

[Prof. Cook replies to the above questions as follows:—ED.]

1. I suppose Mr. Moore means by queen nurseries the small colonies or

nuclei in which the queens are reared. Judge Andrews, of Texas, says queens can be kept caged indefinitely by putting the cage in strong colonies. He says even though the other colonies have queens, the bees will always feed the caged queens. Mr. Alley says in his book, the queens may be thus caged for long weeks, but that there must be feed in the cage; that the bees will not feed them. I have always kept the queens in the small hives or nuclei. By exchanging combs frequently, giving empty cells, the queens are kept active. With a good cellar nuclei can be kept over winter as well as full colonies. The chamber containing them must be small; either a small hive, or, better, the regular hive, with brood-chamber contracted by use of a division board. My brother has kept several nuclei in his cellar the past winter. All but one came through strong. That died of starvation.

2. My observing hive is on a board just outside the window. It is just high enough to be convenient. By lowering the upper sash I can lean on it and study the bees for hours without fatigue. My window is a dormer, so it shades the bees in summer and protects them from storms.

2. I think stimulative feeding is fully described in my Manual. We only need to feed a half pint a day, by the use of any of the feeders described. I think the Smith feeder, illustrated and described in my new Manual (just out) is the best.—A. J. Cook.

The Season in Georgia.

Spring has fairly opened with us at last, but bees are in a backward condition. February was mild and pleasant, and breeding progressed rapidly, March set in cold, and continued so with wet and inclement weather all through. Bees could do nothing, but dwindled fearfully; so by the 1st of April colonies, on an average, were not in as good condition as they were the last of February. Box hive beekeepers have lost heavily.

J. P. H. Brown.

Augusta, Ga., April 20, 1883.

How to Press and Mount Flowers.

In the Michigan State Fair premium list (apiarian department) is offered a premium for the best collection of honey-bearing plants pressed and mounted, or in bloom. Will some one who knows please tell the readers of the Bee Journal how to press and mount flowers?

W. Z. Hutchinson.

Rogersville, Mich.

Bees Still in Winter Quarters.

In the spring of 1881, I had 4 weak colonies, and 2 queenless; they increased to 10, and 1 nucleus, fall count; all were packed in chaff. The spring count of 1882, was 9, and 2 queenless. I had from them 500 lbs. of comb honey, and increased to 28; they were all packed in dry goods boxes, with clover chaff. The spring count of 1883, is 27 in splendid condition; I lost one, caused by old bees and dysentery. My bees are still packed; I expect to leave them so until about May 1, or until the weather becomes settled and warm. My bees are all Cyprians, Italians, and albinos, and I am well pleased with them. I use the A. G. Hill hive, and think it a good one. We have some old fogies here, who keep bees in box hives and brimstone them, etc., and some of them have lost heavily this winter. I could not do without the Bee Journal.

H. Hance.

Bryon, O., April 16, 1883.

Bees All Right.

I have just unpacked my bees, and find nearly all in booming condition. My loss for the winter has been light. I packed, in my usual way, 165 colonies, and, to-day, I find 160 in good condition. Never did I ever see bees in better condition than mine now are. The hives are nearly full of bees, and in some I find brood in four and five frames, with capped drone brood. The weather has been fine for nearly three weeks. I anticipate a fine crop of honey. The white clover has never looked more promising than it does this spring. Success to the Weekly Bee Journal.

L. J. Diehl.

Butler, Ind., April 17, 1883.

North Carolina Bloom.

Apples are in full bloom, and clover soon will be. I lost 15 out of 100 colonies, last winter. My bees are very strong at this time, and promise great things, if we have a good season.

J. W. Hinsdale.

Raleigh, N. C., April 13, 1883.

Bees are Just Booming.

I wintered 42 colonies in the cellar, of which I lost 1; of 19 wintered on the summer stands, packed with sawdust, I lost none; leaving me 60 out of 61 colonies. I put them into winter quarters on Nov. 15, and removed them from the cellar, April 10, making about 145 days in the cellar without a flight. There is but little spotting of the hives; all are in fine condition and strong, excepting about 6 which are a little weak, but still are from fair to good colonies. All are gathering natural pollen, to-day, from willows and soft maples, the first this season. The thermometer indicates from 78° ro 82°, and it is raising quite briskly this evening, at 8 o'clock.

U. E. Dodge.

Fredonia, N. Y., April 15, 1883.

How to use Bee Papers.

I think the printers have scarcely followed "copy," or I have made a strange blunder in my communication, published in the Bee Journal, March 28, page 166, third paragraph. I intended to have written: "Any man who cannot make his business pay for a good journal published in the interest of that business, had better quit the business, etc.," or words to that effect. It now, however, reads: "Any man who cannot make his business pay had better quit the business, etc." You will at once see the difference. The latter quotation, I presume, goes without asking by the necessities of the case, and does not need a special communication to state it, but while the former may be equally as true, yet it is so often in practice ignored as to need a reminder.

R. J. Kendall.

Austin, Texas, March 30, 1883.

[It was printed as written in the copy.—Ed.]

Bees Confined 159 Days.

On page 180, Mr. McKay says who can beat 130 days without a flight? Well, I can. My bees have been in the cellar 159 days without a flight, and have some 10 days more to remain, at least. All answered to the roll call to-day, "21 in number;" loss, thus far, none. The dead on the floor can all be put into a two-quart measure. The above success is due, in a great measure, to the American Bee Journal, of which I have been a constant and interested reader for three years, and never expect to do without it as long as I keep bees. I use chaff mats, and am a strong believer in cellar wintering.

D. L. Herrick.

Brattleboro, Vt., April 15, 1883.

A Swarm Went to the Woods.

I had 4 colonies of bees in boxes and barrels. Three of them I transferred more than a month ago, in the ordinary way. The boxes broke, and induced robbing, and I had so much trouble that I determined I would let the fourth wait and swarm. But seeing Mr. Heddon's plan, I concluded to try it, especially as the weather was warm, apples, clover, etc., blooming, and several colonies of my neigbbor's bees had swarmed during the last few days. I very soon drove the bees into the hive filled with comb foundation; they remained several hours, and took their departure to the woods. I hope others may profit by my experience.

A Subscriber.

Omega, La.

Stinging and Dislike of Bees.

The bees have a natural dislike to me; they come for me quickly, even when walking in the yard, but not at work with them. One sting will sometimes almost cause me to faint. The rule, that the more a person gets stung, the less it hurts, does not hold good with me; the pain is as severe as it was five years ago. I wear veil and gloves, and have a Bingham smoker, but I get stung often. To allay the pain, after the sting, wet clay is the best thing I have ever tried. The best antidote I have ever tried is whisky; two teaspoonsful before I go to work with the bees. I am not used to whisky, and do not want to be; I hate it. Will some of the readers of the Journal tell me what, if anything, I can put on my clothes to pacify them; and what is the best antidote besides whisky, and oblige one who cannot follow hard labor, and do not want to throw away what it has taken 15 years to learn.

Riverton, Iowa. J. H. Stephens.

Convention Notices.

☞ The Mahoning Valley bee-keepers will hold their 13th meeting in the Town Hall, at Berlin Centre, Ohio, on May 5. All bee-keepers, and the public in general, are invited to attend. Do not forget to bring your wives, children, and a well-filled lunch basket. We expect a grand meeting.

L. CARSON, *Pres.*
H. A. SIMON, *Sec. pro tem.*

☞ The semi-annual meeting of the Western Bee-Keepers' Association will be held at Independence, Jackson County, Mo., on Saturday, April 28, 1883, at 10 a. m. Papers prepared for the occasion by the president, secretary and others will be read, and matters of general interest to bee-keepers discussed. A general attendance of persons interested in bee-culture is requested. The present membership of this Association control 2,000 colonies of bees.

S. W. SALISBURY, *Sec.*
Kansas City, Mo.
J. A. NELSON, *Pres.* Wyandotte, Kas.

☞ Quite a number of the leading bee-keepers of Missouri and Kansas met at the Court House, in Independence, Mo., December 23, 1882, and organized a bee-keepers' convention, which was named the "Western Bee-Keepers' Association," by electing the following officers for the ensuing year: Jas. A. Nelson, of Wyandotte, Kans., President; L. W. Baldwin, of Independence, Mo., Vice-President; S. W. Salsbury, Kansas City, Mo., Treasurer. The Association passed a resolution to invite all bee-keepers within a convenient distance, to meet with us at our next meeting and lend us their councils. Adjourned, to meet again at Independence, on the last Saturday in April next, at 10 o'clock, a. m. J. D. Meador, P. Baldwin, C. M. Crandall, *Committee.*

☞ The spring meeting of the Western Michigan Bee-Keepers' Association will be held at Supervisor's Hall, Grand Rapids, April 26, at 10 a. m.

F. S. COVEY, *Sec.*
Coopersville, Mich.

☞ The Union Bee-Keepers' Association will meet in Grange Hall, Eminence, Ky., on Thursday, April 26, 1883. All bee-keepers, and the public generally, are invited to be present.

G. W. DEMAREE, *Sec.*
Christiansburg, Ky.

☞ There will be a meeting of the bee-keepers of Western New York and Western Pennsylvania, to adopt a constitution and by-laws, elect officers, etc., for the Western New York Bee-Keepers' Association, on April 28, 1883, at Fredonia, N. Y., opening at 10 o'clock a. m. All bee-keepers are cordially invited to attend. Discussions on bee-culture, etc. Suitable rooms will be provided.

U. E. DODGE, *Acting Sec.*

☞ The Tuscarawas Valley Bee-Keepers' Association will hold their next meeting in the Town Hall, Coshocton, O., on Wednesday, May 2, at 10 a. m. All bee-keepers are requested to be present.

J. A. BUCKLEW, *Sec.*, Clarks, O.

☞ The spring meeting of the Cortland Union Bee-Keepers' Association will be held in Cortland, N. Y., on Tuesday, May 8, 1883.

M. C. BEAN, *Sec.*

☞ The Iowa Central Bee-Keepers' Association will hold their semi-annual meeting at Winterset, Iowa, on Friday, May 11, 1883. All interested in anything pertaining to bee-culture are invited to attend, and bring anything that will be of interest to the bee fraternity.

J. E. PRYOR, *Sec.*
A. J. ADKISON, *Pres.*

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., April 23, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The nominal price of extracted is 7c. for dark and 9c. for light—here. The supply is abundant and sales are slow.

BEESWAX—None in the market.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—There is no excitement in the honey market, but sales are fair to our regular trade. Offerings are plentiful of extracted and comb honey. Extracted brings 7@9c. on arrival. The sales of comb honey are very slow, although there is a large supply of first-class quality on the market. It brings 12@18c. on arrival.

BEESWAX—Comes in slowly and brings 20@30c per lb., according to quality. CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand is light and it is not now probable that all of the comb honey can be sold before a new crop comes. Prices are very irregular and generally low: 15@16c. for white, and dark unsalable. Extracted, very little trade is being done in it. 7@9c. is about the market.

BEESWAX—35@36c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—Buyers are readily obtained for choice comb or extracted at full figures, but off qualities meet with slow sale.

White comb, 14@17c.; dark to good, 11@13c.; extracted, choice to extra white, 8½@9½c.; dark and candied, 5@7½c.

BEESWAX—We quote 30@33c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Very quiet; dull. Comb at 14@16c.—some inferior sold at 10c.; strained at 6½@7c., extracted at 7½@8½c., lots in small packages more.

BEESWAX—Scarce and wanted at 35c.

W. T. ANDERSON & CO., 117 N. Main Street.

CLEVELAND.

HONEY—Is a little lower, and at the lower price it has moved off a little better of late. 1-lb. sections of best white sold at 18½@19c.; second grades, 1-lb., 17c.; 2-lb. sections a little slow at 17@18c. Extracted very dull at 9@11c.

BEESWAX—None in market.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—Our supply is gone; we have none to quote.

CROCKER & BLAKE, 57 Chatham Street.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the adress we already have on our books.

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1 year, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with $6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For four subscribers, with $8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with $10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

☞ Mr. James Heddon announces on another page that he cannot supply any more Hives, etc., in the flat. All interested should notice the advertisement.—*Adv.*

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts each, or $8 per 100.

☞ Do not let your numbers of the BEE JOURNAL for 1882 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

◆

An Instantaneous Light.

Such in a word is the unique apparatus on exhibition at the rooms of the Portable Electric Light Co., 22 Water Street, Boston. It occupies the space of only 5 square inches, and weighs but 5 pounds, and can be carried with ease. The light, or more properly lighter, requires no extra power, wires or connections, and is so constructed that any part can be replaced at small cost. The chemicals are placed in a glass retort; a carbon and zinc apparatus, with a spiral platinum attachment, is then adjusted so as to form a battery, and the light is ready. The pressure on a little knob produces an electric current by which the spiral of platinum is heated to incandescence. The Portable Electric Light Company was recently incorporated, with a capital of $100,000, under the laws of Massachusetts. The usefulness of the apparatus and the low price (five dollars) will no doubt result in its general adoption. Some of the prominent business men of the State are identified with this enterprise. In addition to its use as a lighter, the apparatus can also be used in connection with a burglar-alarm and galvanic battery. — "Boston Transcript," Dec. 30.

◆

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......$1 00
" 100 colonies (220 pages)...... 1 50
" 200 colonies (420 pages)...... 2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

◆

☞ Postage stamps, of one, two or three cent denomination, accepted for fractional parts of a dollar; but money is preferred.

◆

☞ Will the various manufacturers of the Standard Langstroth hive please send circulars giving accurate dimensions, as made by them, to S. X. Clark, Delavan, Wis. The result as to the different sizes will be published in the AMERICAN BEE JOURNAL.—*adv.*

New Catalogues and Price Lists.

We have received the following new Catalogues and Price Lists of Bees, Queens or Apiarian Supplies:

G. B. Jones, Brantford, Ont.
Elvin Armstrong, Jerseyville, Ill.
Geo. W. Baker, Lewisville, Ind.
Dr. Wm. R. Howard, Kingston, Tex.
W. G. Russell, Millbrook, Ont.
J. H. Tilley & Bro., Castle Hill, Me.
Thos. J. Ward, St. Mary's, Ind.
C. R. Mitchell, Hawkinsville, Ga.
G. H. Knickerbocker, Pine Plains, N. Y.
A. C. Kendel, Cleveland, O.—field, garden and flower seeds.

◆

☞ In Mr. S. Corneil's excellent article on "Ventilation of Bees," in last week's JOURNAL, on page 200, an omission was made, when putting it in type. In the second column, 28th line from the top, after the period, add the following sentence: "It is just so with the air."

◆

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

◆

☞ On the next page may be found the advertisement for a "comb foundation fastener," by D. C. Talbot, of Elroy, Wis., to which attention is invited.—*adv.*

◆

Special Notice.—We will, hereafter, supply the Weekly BEE JOURNAL for 1883 and Cook's Manual in cloth for $2.75, or the Monthly and Manual in cloth for $1.75. As this offer will soon be withdrawn, those who desire it should send for the book *at once.*

Golden Italians Again!

One Golden Italian Queen, warranted purely mated, $1.50. One purely mated and tested, $2.50. One pure Queen, not warranted, $1.00. All the above Queens are of the finest stock in the country. I sold over 300 last season, and had but one complaint. Full colonies ready to divide, for $10.00; safe arrival guaranteed.
17Atf L. J. DIEHL, BUTLER, IND.

E. T. LEWIS & CO., Toledo, Ohio,
Manufacturers of the U. S. STANDARD Honey Extractor (new improvements), and all other Apiarian Supplies. Send for circular. 17A 5Btf

BEE-KEEPERS, before ordering your APIARIAN-SUPPLIES send for our large illustrated catalogue, sent free to any address.
E. Kretchmer, Coburg, Iowa.
13A22t5B4t

1883 ITALIAN QUEENS. 1883
Still they go—Bees for business all ready to ship. Send for our new Circular of Queens, full colonies and nuclei; it tells how to introduce queens.
T. S. HALL,
16A2t Kirby's Creek, Jackson co, Ala.

Bee-Keepers' Handy Book,
Or, 22 Years' Experience in Queen Rearing.

Opinions of Eminent Apiarists of its value:

From Geo. W. House, Fayetteville, N. Y.—"The information gained by a careful study of the new method of Queen Rearing, I consider worth $100 to me. It supplies a long-felt want to every Queen breeder and dealer, and is invaluable to any bee-keeper.

From James T. Norton, Winsted, Conn.—"I have read your book with much satisfaction and profit; it is written concisely and to the point. It should be in the hands of every bee-keeper."

From Rev. D. D. Marsh, Georgetown, Mass.—"Your book on Queen Rearing has been received. I am very much pleased with it. It is refreshing to see how frankly you have divulged the hard-earned secrets of your long experience. Your book contains a great deal of that information, which those who have already taken the 'first lessons' in apiculture will find new and valuable."

It will be remembered that Mr. E. T. Flanagan, of Bellville, Ill., went to Kenner, La., in March last to rear early Queens. After receiving the book he wrote me thus.—"I would have cheerfully given $50.00 to have had your book and apparatus here when I first came. I am rearing 300 Queens."

From L. C. Root, Mohawk, N. Y., and one of the most prominent apiarists in America.—"Your book has been received. Its title, 'TWENTY-TWO YEARS EXPERIENCE IN QUEEN REARING,' is enough to convince any bee-keeper that they cannot afford to be without it. Good Queens is the rock upon which bee-keeping rests. I predict a large sale for the work."

From J. M. Hicks, editor of the bee department, American Grange *Bulletin.* Mr. Hicks is well known to nearly all bee-keepers in the west.—"Book received. I pronounce it the best work of the kind, of American publications. I consider it a *perfect gem* for the practical bee-keeper, and should be in the hands of every apiarist."

Until May 1st the book will be sold for $1.00 per copy. After that date, $1.25 per copy, handsomely bound in cloth, and $1.00 bound in paper. Fractionable parts of a dollar can be sent in postage stamps.

Our new circular and price list of Queens for 1883 contains 32 pages, and is illustrated to show our new way of rearing Queens. Send your address on a postal card for it.

HENRY ALLEY, Wenham, Mass.

FOR EXCHANGE.
Comb Foundation Machine for pure Italian Bees.
Address, S. LONGLEY, CINCINNATI, O.
☞ In perfect order. 17A 1t.

The Bee-Keepers' Guide,
OR, MANUAL OF THE APIARY.
9,000 SOLD IN SIX YEARS.
10th Thousand Just Out.

More than 50 pages, and more than 50 fine illustrations added. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World.

I had hoped and expected to make the price one dollar, and it has been so advertised by Mr. James Heddon and in Alley's new book; but owing to the increased size and expense, this is impossible.

PRICE, BY MAIL, $1.25.
Liberal discount to dealers and to clubs.
A. J. COOK,
Author and Publisher, Lansing, Mich.

1000 COLONIES of Italian and Hybrid bees for sale in Langstroth and Simplicity hives.
Three-Frame Nuclei
a specialty. Safe delivery guaranteed. Write for particulars and special rates to
FLANAGAN & ILLINSKI,
Box 819. BELLEVILLE, St. Clair Co., ILL.
17A4t 5B2t

Vandervort Comb Fdn. Mills,
Send for Samples & Reduced Price-List.
10A19t J. VANDERVORT, Lacyville, Pa.

OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

VOL. XIX. CHICAGO, ILL., MAY 9, 1883. No. 19.

OLDEST BEE PAPER IN AMERICA
THE AMERICAN BEE JOURNAL
ESTABLISHED IN 1861

Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

Bees and Honey in Ancient Times.

In the books of antiquity, honey is mentioned as one of the most ancient articles of food—man's first source of nourishment. Aye, and are we not informed that when "the morning stars sang together" over the pristine beauty of a new born world, that under the bright smile of Heaven, Adam and his happy spouse were presented with a glorious home in an enchanting garden filled with "supernal fruits and flowers" of Heaven's own planting—nurtured and watched by hosts of angelic attendants, who had made that Eden-home a beautiful Paradise? There "the beasts of the field and fowls of the air" dwelled together in perfect harmony, under sun-lit skies; and among the beautiful bowers of that holy retreat, Eden's feathered songsters rapturously joined in "the swelling chorus."

There, too, reveling in the precious nectar yielded from the bloom of glory-clad hills, shrubs and flowers, was "the little busy bee," with its joyous hum and rapid flight—gathering the plenteous sweetness for the tiny but numerous family about to spring into existence, at its little home! Ever did it flit from leaf to leaf and flower to flower, gathering the honeyed treasures, that its "stores" may be abundant for generations yet unborn—when winter's sable-shades might settle down upon the earth, visiting it with cold and storm, chilling the "little pets" by its frozen breath or fiercer blast!

No historian has transmitted to our day a description of the rude hive provided for the bees that Noah carried into the ark, nor are we informed whether Abraham's bees were kept in log-gums or box-hives, but it *is* recorded that the land where Abraham dwelled—Canaan—was one "flowing with milk and honey;" and when the old Patriarch, because of the famine that prevailed there, sent his sons to Egypt to buy corn, he sent as a present to the Egyptian ruler some of Canaan's famous honey. We may well conclude that Canaan's honey was then as famous as in subsequent ages was the honey from Mount Hymettus in Greece.

In later years, Abraham's offspring journeyed through the deserts of Arabia, and in order to sustain them there, God gave them manna from Heaven, to eat; they said that "the taste of it was like wafers made with honey." When the Amorites came out of the mountains of Sier against the children of Israel, "they chased them like angry bees." In the Mosaic law we find many statutes regulating the ownership of bees. When Jonathan was engaged in battle with the Philistines and became tired and faint, he partook of honey, and was greatly refreshed. David and his army was provisioned in Gilead, and honey was one of the luxuries enumerated. The Jews placed honey before their guests as a sign of welcome, giving them the greatest luxuries that the land produced. Jeroboam sent his queen with presents to the Prophet Ahijah, and included honey. In the tythes of the Jewish Priesthood, honey is enumerated. Job signified the plenteousness of honey in the land, by speaking of "brooks of honey." Solomon, relished Canaan's delicious honey, and volunteered this advice: "My son eat thou honey; because it is good." Isaiah mentions "the bee that is in the land of Assyria," and declares that bees were so plenty that "butter and honey shall every one eat that is left in the land."

The earliest mention of honey as an article of commerce, is, that the Jews were engaged in trading it at Tyre, that old and honored mart of trade in Phœnicia. Sirach, who lived about the time of the re-building of the Temple of Jerusalem, speaking of the necessaries of life, mentions honey, with flour and milk. Solon, in the year 600, B. C., enacted a law, requiring that bee hives in cultivated fields, must be 300 feet apart. Homer, Herodotus, Aristotle, Cato, Varro, Virgil, Pliny, Columella, and other ancient sages, composed poems, extolling the activity, skill and economy of bees. The celebrated Cilician apiarist Aristomachus, of Solus, with 58 years of experience in bee-keeping, wrote on the subject of bees and honey, some 500 years, B. C.—but that work is lost to us. The Persians, Grecians and Romans, used honey quite extensively as an article of diet; they also used it largely in *preparing* their food, and by it, most of their beverages were sweetened.

More than 3,000 years ago, it is said that Samson proposed this riddle to the Philistines: "Out of the eater came forth meat; and out of the strong came forth sweetness," and gave them seven days to expound it. They are said to have been unable to explain it, and by threats of burning his wife and all her kindred, they extorted the explanation from her, as follows: "What is sweeter than honey? And what is stronger than a lion?"

Samson was not only a riddle-maker, but was himself a riddle! It is said that while he was quietly walking, unarmed, in the vineyards at Timnath, "a young lion roared against him," and "he rent him, as he would have rent a kid." "After a while, he turned aside to see the carcass of the lion, and, behold, there was a swarm of bees and honey in the carcass of the lion." Thereupon we are told that he commenced to regale himself on the honey, and gave of it to "his father and mother, and they did eat." This was the key to his riddle.

Of course it was very singular that he should have slain a lion in the prime of his vigor, and yet more strange that a swarm of bees should have taken possession of the carcass.

This remarkable story of ancient times is full of enigmas. In explanation of some of these, Oedman remarks as follows:

"The lion which he slew had been dead some little time before the bees took up their abode in the carcase, for it is expressly stated that 'after a time' he returned and saw the bees and the honey in the lion's carcase; so that if any one here represents to himself a corrupt and putrid carcase, the occurrence ceases to have any true similitude, for it is well known that in those countries, at certain seasons of the year, the heat will, in the course of 24 hours, so completely dry up the moisture of the dead camels, that without undergoing deconposition, their bodies will long remain like mummies, unaltered, and entirely free from offensive odor."

In that country, it is said, that with wild beasts, birds and insects, coupled with the dry heat, a dead body is soon cleansed from all corruption, and the bones are clean and white, and a swarm of bees may readily have used such a carcass for a hive. We do not propose to attempt to clear the story of all difficulties, but will draw some lessons from Samson's very singular adventure.

In those days, among the Hebrews, Romans, and Greeks, honey appears to have been about the only sweet, and was used in place of sugar, then unknown. Honey was then considered among the necessaries of life. It is true that Pliny, Galen, and some other authors allude to *saccanon* as a white chrystallized gum obtained from an Indian reed, which was sometimes used as a medicine, and was "brought from Rome, in pieces about the size of a nut." The Arabians were first to bring sugar to notice, after they had pushed their victorious arms into the Western regions.

The first writers by whom sugar, as such, is mentioned, says an author, lived in the 12th century, in the time of the crusades. Albert of Aix states that the soldiery, when near Tripoli, in Syria, pulled up the sweet stalks of a reed grown there abundantly in the fields, and called *zucra*. Its wholesome juice refreshed them, and was so grateful to their taste that they were incessantly sucking it. This valuable plant was diligently cultivated every year. When ripe for harvest, the natives crushed the reeds in a mortar, pressed out the juice, and preserved it in vessels till it became thick and granulated, and resembled snow or salt in its whiteness.

In the year 1306, when *Sanudo* compiled his Mysteries of the Crusaders, the sugar cane was not yet cultivated in Sicily, though it was then already grown extensively in the Morea, in Cyprus, and Rhodes. A century later it had become so common in the island of Sicily, that the infant Don Henry, of Portugal, readily obtained there a supply of plants for its introduction in Madeira. From here and from the Canaries it was carried to America, where it has been so extentively cultivated that the European plantations were speedily adandoned, and America now supplies with sugar not only nearly all Europe, but a large portion of Asia also. The sugar cane was first brought to the Western Hemisphere by the Spaniards.

Another writer remarks as follows on the consumption of honey:

The consumption of honey and wax, and consequently the demand for them, was so great among the Romans, that the production thereof was an object of the highest importance in rural economy; and no one was deemed qualified to manage a farm who did not thoroughly understand bee-culture as then practised. This was to be made an essential source of revenue to the proprietor, for the Romans were a practical people, who, according to Columella, looked to an increase of annual income in their pursuits more than to a mere gratification of taste. But the natural supply of honey in Italy was insufficient for the home demand, and large quantities were imported from Africa, Crete and Sicily, the superior quality of which induced the Italian beekeepers to send the finest and most aromatic of their own to market under the name of Sicilian and Cretan honey, as we are informed by Varro. That of inferior quality, as we learn from Pliny, they were in the habit of coloring and sweetening by an admixture of other substances, and strengthening by the addition of various kinds of wine. An annual tribute of honey and wax was imposed on conquered provinces and territory, as on Pontus and Corsica, and the hope of obtaining additional supplies, it is supposed, was among the inducements for their invasions of Germany.

A large amount of honey was required by the religious ceremonies and worship of the people. "Nothing is sweeter than honey," says Varro, "grateful to Gods and men. It is used on the altars." It was particularly prominent among the sacrifices of the peasantry. The numerous rural deities, whose favor and protection they invoked, and to whose service they were attached, claimed a portion not only of the products of their gardens, orchards and fields, but of their flocks and herds, and of their apiaries. Also at the feasts of the Gods, described by Ovid, which required costly aliments and precious wines, the delicious honey-cake was never wanting. These were composed of meal, honey and oil, and had to be equal in number to the years attained by the offerer. For the domestic worship also of their household deities—the *Penates*—honey "the gift of the Gods," was indispensable; and it constituted a large item at the vernal consecration—ambarvalia—of their fields in April, as well as at the annual thanksgiving in October, and likewise at the special worship of Ceres in November, who was regarded as the "flock increaser," and the "honey dispenser," and who, by her union with the rain-god Zeus, caused fruitful seasons. Her priestesses were called "bees," because honey was the first food of the infant Dionysus, the son of Bacchus, whom Ceres bore in her arms, as Isis carried Horus; and she was the instructor of Aristæus in bee-culture. Bacchus, too, demanded a share, as the "discoverer of honey," the "admirer of all sweetness," and the "decorator of the blooming meadows."

Every sacrificial victim offered to the higher Gods was sprinkled with milk, wine and honey, and large quantities of the latter were required in the solemn celebration of their mysteries, and in the obsequies of the dead. The later Romans poured honey in the grave of the deceased. It was with them a symbol of death. It will hence readily be inferred that their religious ceremonies involved a large consumption of honey, and that this must have induced increased attention to bee-culture. But the quanity used in domestic economy was still greater, as they were unacquainted with the sugar now in common use. What they called *saccharum* was a very different article, obtained from Arabia and India. It was, as we learn from Pliny, used only medicinally. Honey was thus the only sweetening employed by them for meat and drink, and was as indispensable in their households as sugar is now in our families.

In view of the death-dealing adulteration of sweets in our day, is it not our duty to imitate Samson, who, when he had found the God-given pure sweet—honey—sought out his relatives and *took some of it to them to eat?*

Thousands and tens of thousands of children are dying all around us, who, because their ever-developing nature demands sweetness, crave and eagerly demolish the adulterated "candies" and "syrups" of modern times. If these could be fed on honey, instead, they would develop and grow up into healthy men and women.

Children would rather eat bread and honey than bread and butter; one pound of honey will reach as far as two pounds of butter, and has, besides, the advantage that it is far more healthy and pleasant-tasted, and always remains good, while butter soon becomes rancid, and often produces cramp in the stomach, eructations, sourness, vomiting and diarrhœa. Pure honey should always be freely used in every family. Honey eaten upon wheat bread is very beneficial to health.

The use of honey instead of sugar for almost every kind of cooking, is as pleasant for the palate as it is healthy for the stomach. In preparing blackberry, raspberry or strawberry short-cake, it is infinitely superior.

It is a common expression that honey is a luxury, having nothing to do with the life-giving principle. This is an error—honey is food in one of its most concentrated forms. True, it does not add so much to the growth of muscle as does beef-steak, but it does impart other properties, no less necessary to *health* and vigorous physical and intellectual action! It gives warmth to the system, arouses nervous energy, and gives vigor to *all* the vital functions. To the laborer, it gives strength—to the business man, mental force. Its effects are not like ordinary stimulants, such as spirits, etc., but it produces a healthy action, the results of which are pleasing and permanent—a sweet disposition and a bright intellect.

How astonishingly appropriate is even its name—honey! Derived from the Hebrew word *ghoneg*, literally it means DELIGHT. Humanity may, therefore, delight itself with honey, as long as the sun endureth!

To Our Exchanges.—We have prepared the first article in this paper with especial reference to its adaptability for general reading, and respectfully invite the editors of our Exchanges and others to copy it into their papers. It contains information of value to the general public, and should be read by every one interested in providing a pure sweet for the young, middle-aged and old,—both food and medicine. Bee-keepers who desire to increase honey consumption, should send to us for an extra copy, and personally take it to the editors of the local papers of the county, and ask them to copy it. We print a large edition this week, and will supply it *free* for this purpose, while any are left.

☞ By the *Review*, Butler, Ind., we learn that Mr. L. J. Diehl has lost only 4 colonies out of 160, during the past winter. Generally the losses have been very light, and the prospect for a good honey crop is excellent.

The Partridge Pea.—Prof. A. J. Cook, in the *Rural New Yorker*, gives the following concerning this honey plant:

Among the many plants which I receive each year from the bee-keepers throughout the United States, as furnishing abundant nectar for the bees, no one comes more frequently, or from a wider range of territory, than the partridge pea—*cassia chamæcrista*. Like the clovers, this is a leguminous plant, and like its near relative, the cow pea, it not only furnishes nectar from the flowers, but even more abundantly from extra-floral glands situated on the peduncles. Gray speaks of this as more abundant southwards; but I have received it very frequently from Iowa, Northern Illinois and Wisconsin. The flower is bright yellow, and the habit of the whole plant is quite attractive. The Pulse family is very rich in bee-plants, as will be seen by the following list: White and alsike clover, melilot, or sweet clover, locust, wistaria, Judas tree, honey locust, and the cow and partridge peas. We thus see that the Pulse family, like the Mint and Compositæ families, are of great importance to the apiarist.

Queen Rearing.—Mrs. L. Harrison, in the *Prairie Farmer*, gives her views on her *modus operandi* of queen-rearing, thus:

We like all kinds of bees, yet Italians have our preference; they are proof against moths, cling to the combs better, and are more enterprising than the common bees of the country. Italians are so common that we doubt if there are many pure German bees now in this country.

Persons who have kept bees for any length of time have noticed that some colonies, whose conditions are the same as the remainder of the apiary, produce more honey than others. These colonies are the ones to breed from, if honey is the object in view. If a colony is deprived of its queen, in six hours the bees will be constructing cells to raise another. Worker eggs, or larvæ not over three days old, are used for rearing queens. Some breeders claim that the best results follow when the bees have access to eggs only. Bees seem to prefer to raise queens on new white combs; such an one should be given to the breeding colony, and placed in the centre of the hive; holes might be cut in it, making convenient edges for the bees to attach their queen-cells, so that they can be easily removed, if desirable to do so. On the third day this comb should be given to queenless bees, and they will immediately commence enlarging cells. On the twelfth day, if it is desirable to preserve the queens, all cells should be removed but one, as the first one that emerges will destroy all rivals. Those who make a specialty of rearing queens, remove the frame to an incubator and examine it, often removing the queens to a nucleus, as fast as hatched. Those who have not a convenience of this kind, can cut out the cells, and give them to nuclei, previously formed long enough to have cells of their own. We have had many cells destroyed by giving them to newly formed nuclei, but never lose them if they have cells of their own. To save the time of inserting cells, we often wait until the bees have eaten off the outside covering, showing that the queen will soon be out, and then remove the cell with adhering comb, so that it will fit between the frames of honey, placing point downwards, and in a short time the queen is out. We preserve cells with *variations;* sometimes we place them over cages, similar to a cover of a tin pepper-box, only the tops are of wire cloth; and again cut out cells and put them into cages (made of wire cloth by rolling around the broom handle, with stoppers in each end), and place them in the cluster. If young queens are introduced, when they are only a few years old, they are generally well received.

System in the Apiary.—Mr. A. E. Foster, in the *Practical Farmer*, gives this very timely advice on systematic work in the apiary:

"A place for everything, and everything in its place." I know of no place (unless it is in the family) where this rule should be followed more closely than in the apiary. The prosperous bee-keeper is always in a hurry, needing different supplies as he examines different hives, and it is very necessary that he should know just where to find things as he needs them. If you have not this faculty well developed, cultivate it, by assigning everything in your apiary a place, and keep everything in its place. The time lost in hunting here, there and everywhere, for what you need, will amount to a great deal, more than any one would suppose; and it will not only save time, but keep you from getting in a bad humor, which generally follows one of those long searches. The mother who teaches her child to put things where it gets them, does the child good, and saves herself much trouble, in picking things up after it.

☞ Mr. O. O. Poppleton has returned from Florida, where he has spent the winter, accompanied by his wife. They have had an excellent time, and look well. They brought us a sample of mangrove honey from the apiary of Mr. W. S. Hart, of New Smyrna, Florida. In the article, on page 213, entitled Bee-Keeping in Florida, Mr. P. points out two errors, which we correct with pleasure. They were, doubtless, inadvertantly made by Mr. Lake in copying. The "bee belt" is 25 miles (not 125); and the red mangrove grows *below* the head of Indian river—not "above," as it is there stated.

CORRESPONDENCE

For the American Bee Journal.

The Best Bees—How Obtained.

JAMES HEDDON.

The following was received April 18, and I asked Mr. Hutchinson if I might insert it, at the head of my reply as an excuse for again coming forward with what, to me, is not the most pleasant of subjects to discuss at the present time.

Mr. Heddon.—When you have the time, please give us one more article on "The best bees—how they were obtained." Please tell us if the bees that you now have are any better than those you had when you first made the cross between the dark Italian and brown German, if so, in what respect, and what methods and selections were employed to bring about the desired results. What I wish to know is, if I would obtain as good results at once, by crossing the two above mentioned varieties, as I would to obtain some of your bees; that is, can I gain five years by commencing where you are now? Some bee-keepers have remarked, in my presence, that "Heddon's bees were nothing but hybrids; anybody can get hybrids easily enough, without obtaining his hybrid queens." Now, what I wish to know is, if your hybrids are superior to the hybrids that would naturally result, at once, from a cross between the dark Italian and the brown German varieties, or whether, by selection and care, you have developed a superior strain of hybrids; that is, superior to what would result naturally at once from a cross between the above mentioned varieties. In a year or two more, if I get well started in the production of comb honey, I shall cut loose from this band-business. I shall make the production of comb honey my speciality, then if any wish to obtain my queens they can take such queens as I know to be best, or they can let them alone. Now, it is my honest opinion that the kind of bees that you have, are the best for the production of comb honey, and I wish to know which is the simplest, easiest, quickest and best way to stock my apiary with such bees, and I feel certain that you will let neither modesty nor self-interest influence you in giving me advice upon the subject.

W. Z. Hutchinson.

Rogersville, Mich., April 16, 1883.

I started into this business with the purchase of 48 colonies of black or German bees, all in box hives except eight, which were in old-fashioned Langstroth hives. They were purchased of farmers about this vicinity, not buying more than six of any one person; generally gotten in lots of 1, 2 and 3. Six colonies were bought of one Mr. Southerland. Let us call these the S. bees. Not knowing enough about the business at that time to keep busy all the time with this apiary, and bees being a new and mysterious thing to me, I spent many hours sitting close to the hives and watching the little sharp and industrious individuals come and go, and guard the entrance. I was not long in discovering that different colonies possessed remarkably different characteristics and looks. Right away I became attached to the S. bees, and the superiorities that these colonies plainly manifested, were very well marked in each and every colony. With these superior traits, was a marked physical difference; these bees were all larger and lighter in color than any of the other 42 colonies. Five colonies purchased of Mr. H—— were the meanest and most worthless colonies in the apiary. Every colony was vicious, and seemed to spend most of their time "seeking whom they might devour." They never looked into the surplus boxes that season. The season was the worst in my experience. But little honey was gathered, and the 6 S. colonies (all in box hives) had more than all the rest added together. The 5 H. colonies were the smallest and blackest bees in the yard. Ever since I have noticed that traits and marking like the above, keep company with each other wherever I have seen German bees.

A few seasons later I got bright three-banded Italians of several prominent breeders. These Italians possessed some points of merit over my brown S. strains, but on the whole, they were not their equal for the apicultural pursuit of dollars and cents. Crosses between the two races were a cross "cross." I wished I had never seen them. I wrote against the Italian bee, and the trade in them. The "hybrids" were pretty good workers, better than the pure Italians, but too irascible for comfort. While I was freely exclaiming my disgust for these Italians, Mr. Oatman, of Dundee, said to me: "If you will just try some of my stock, which is of the dark leather-colored Dadant importation, you will become a convert to the Italian bee, I feel sure."

Always open to conviction, I tried once more, and sure enough, I did find these bees vastly superior to the bright, shorter bodied Italians. At the time of their advent into my apiary, I had bred my colonies, nearly all, to these brown Germans, and, as I suppose all do, who breed bees, had selected colonies of the best qualities to breed from. This was forced upon me, as I was somewhat mixed up with some of the inferior blood. Not much so, however, as severe winter losses had assisted me to rapidly get rid of this blood. As good as these dark Italian bees were, the brown bees still possessed some marked traits of superiority over them. Of course, crossing between these races took place at once, and I soon had the happy privilege of observing bees that possessed more valuable characteristics, valuable to him who wants profit from the business than either one of the races in their purity.

A curious fact here presented itself. None of the crosses (or hybrids) between the brown German and dark Italian bees were bad in temper. Both of their parent strains were the mildest of their races, and the crosses are just as amiable as any bees I ever handled.

That was about six or seven years ago, and since that time I have, in as great a measure as practical, directed the breeding and crossings, and without knowing the reason why, colony No. 36 gathered more than No. 29, and believing that whatever the reason might be, the law of hereditary claimed it for its own. I have bred from the colonies that gave me the most surplus honey, and were the best behaved toward their operations and each other. These two, have I made the vital points. I soon learned that I need not care for the number of rings. Two years ago I sold to Mr. Shirley my Glenwood apiary. At that time the bees were of my mixed races, as mentioned above. Mr. Shirley is an energetic and skilled apiarist, and a master at breeding, but he has a fancy favoring the rings, and he has, in breeding, added to my list of good-nature and honey gathering qualities, the other point of three bands, and he works with my bees here some every season, and I cannot but believe that he will agree with me that he cannot see that his bees are any better, in any respect, than my *hybrids*, as Mr. H.'s acquaintances are wont to call them. They are hybrids, but I avoid the use of that word, for it has been made to sound ugly, because of the old irascible crosses that went by that name. I think that Mr. Hutchinson has made a wise determination, and one that he will not regret. I am satisfied that, with good bees, proper fixtures, and the clear calculation of Mr. H., the production of comb honey has far more profit with it than any queen business.

This is not all. I find that the time has come when large numbers of bee-keepers are looking at the matter as does Mr. H. and myself, and I predict that, within two years, four-fifths of the bees sold in this country, will be ordered for their merits, and not for any special number of bands.

I have frankly told you of my experience in the matter, and once more given my deductions, drawn from that experience, and I leave Mr. Hutchinson to answer the rest of his questions from the reasonings of his own brain.

Dowagiac, Mich.

For the American Bee Journal.

Old Fogy's Plan of Bee-Culture.

FRANK. B. RIFE.

The terrors of winter has passed, which has kept our little workers confined for so long; spring has opened again, and the busy hum of their wings is heard from morning till night, gathering the nectar from the wild flowers.

I wintered my bees on the summer stands, with excellent results. I put 13 on a long bench in November, and boarded up the west side, so as to be a protection against the west winds, and they came out all right this spring, all being very strong but two, which were weak in the fall. Bees, in this locality, are booming this spring; they are getting such an early start on the elms, etc.; the peach bloom is just coming in, and the prospect is good. I dealt considerably in the fur business this last winter, which afforded me a great deal of traveling; in which I paid the greatest attention to bees and the different methods of bee-keeping, during the winter. I saw all kinds of bee hives, from the old-fashioned log gum, to the finest movable frames, and among them all, the Langstroth hive is my choice, for it has more advantages than any other hive that I have seen. I inquired of all the bee-keepers I met, their method of management, and their opinion of the movable frame hives, and found that all who had used the movable frame hive, were well satisfied there with.

I fell into company, for a night, with an old man who keeps bees in the old log or stump hives. Quite a number of the old log gums were scattered throughout an old half-pruned orchard, which looked like so many stumps or ash gums, and, seeing no supers or caps, I asked the old gentleman how he obtained a surplus of honey from his hives, as I saw no caps. "Caps! What do I want with caps? I see, young man," said he, "that you know nothing at all about bee-keeping and honey taking, and I will tell you something about bees and honey, and my experience is worth listening to. In the first place, cut down a hollow lime or sycamore tree, saw off 25 or 30 hives; then cut and nail a clapboard top on each of them, then bore four auger holes about the middle of each; now, make two tapered pins and drive into them." "Why make the pins tapered," I asked. "I will tell you by-and-by. Chink around the tops with rags, and they are ready for the bees. After the bees have stood in them for four years, they are old enough to take. To take the honey, you must do this: About harvest, take a gum, turn it upside down, set an empty one on the top, draw a sheet around the joint where the two gums meet, drum on the lower gum with a stick, and scare the bees up into the empty one. Three or four can take hold of the gums and lay them upon a couple of good, stout fence rails, laid sloping upon the fence. Now bring a bread tray to catch the dripping honey, pry off the head of the hive, roll up your sleeves, and go to work with your smoker and knife, and you will soon have a tub full of honey. After you have emptied the old hive, place the new one, and the bees, on the old stand, and you will be all right. But they will not do to take until they are four years old. You see you can have 8 or 10 to take every harvest, and always have a supply of honey on hand." "Exactly," said I; "but do you not believe movable frame hives would be ahead of all your plans?" "Tut, tut," said he, "I have never seen one, neither do I want to; I have heard enough about them to know that my plan is much better; much better, sir. Don't you see that a hive full of drawers and shelves would discourage the bees, and wouldn't be worth a cuss. If you want to raise bees, you take my plan, and you will have lots of bees and lots of honey, and become well satisfied that I know all about bees."

Malaby, O., April 17, 1883.

* * *

Planter's Journal.

Bees and Honey in Mississippi.

O. M. BLANTON.

The following is a tabulated statement of the apiaries of Judge Harriman and Messrs. Adams and McLendon, of Chicot County, Arkansas, and Mr. Vaught and myself, of Washington County, Mississppi. The labor and shipping cases are not deducted from the proceeds. We consider the season of 1882 as more than an average one, but by no means extraordinary.

Tabulated Report for the Year 1882.

NAMES.	No. of Colonies Spring, 1882.	No. of Colonies Fall, 1882.	Swarms Lost.	Pounds of Extracted Honey.	Pounds of Comb Honey.	Total Pounds of Honey.	Pounds Per Colony.	Pounds of Wax.	Total Proceeds.	Proceeds Per Colony.	No. of Increase of Colonies.	Value of Increase.	Total Proceeds of Apiary.	Total Proceeds Per Colony.
Robert J. Adams........	3	15	2	1213	72	1285	428	8	$ 113 52	$37 84	12	$ 36 00	$ 149 52	$49 84
G. C. Vaught............	39	76	25	1390	5060	6450	165	175	847 75	21 73	37	111 00	958 75	24 56
Judge H. A. Harriman..	65	90	80	7500	100	7600	118	40	630 40	9 90	25	75 00	705 40	10 73
Wm McLendon	70	130	8	9000	110	9110	130	210	796 60	11 09	60	180 00	976 50	13 95
Dr. O. M. Blanton.......	256	358	26	30002	840	30842	120	160	2,532 34	9 89	102	306 00	2,838 37	11 08
Totals.............	433	669	141	49105	6182	55287	128	593	4,920 61	11 36	236	708 00	5,628 64	13 00

Judge Harriman's report is excellent, when you consider the great loss of swarms; his apiary is in a grove of forest trees, and he failed to clip his queen's wings, and, besides, he neglected his bees, owing to his judicial and plantation duties.

Bee-keeping is a science, and requires a great deal of study. With a reasonable amount of enthusiasm, hard work and strict attention, one man can attend to 100 colonies.

With comb foundation as a guide, that the bees may build their combs straight; with the movable frame, to manipulate your combs and bees with ease; the uncapped knife and extractor, to remove the honey by centrifugal force; the smoker to quiet the little workers, and the queen cage to control and introduce your queen—with this furniture, so to speak, you are prepared for work; and without any one of these you will certainly fail.

Honey should be taken from the hives almost as rapidly as the bees gather it, at least every ten days; and when they are bringing in the nectar rapidly, I extract from every comb that has any honey, even in the brood-chamber, and when not capped over; running the extractor slowly enough to discharge the honey without throwing out the eggs and larvæ. In a few hours there is enough honey stored for feeding the young bees. When the honey flow slackens, go slow with your extractor, and never extract when the flow ceases. I ripen the honey by evaporation in large tanks covered with cheese-cloth.

I ship in new cypress barrels of 525 pounds net, and comb honey in 28 pound cases.

We never plant anything for bees in this rich alluvial country. Every tree, shrub and plant yields more or less honey. I have never known bees to be afflicted with any disease.

To make a specialty of bee-keeping on a large scale, there is nothing that pays more for the capital invested, but do not suppose there is no hard work in it. The bee-keeper only goes to church in swarming season, when the sun goes down.

These figures seem extraordinary, yet they can be exceeded by the gentlemen with their present experience and a good season.

Greenville, Miss.

* * *

For the American Bee Journal.

Importing Queens from the Orient.

FRANK BENTON.

It seems, when one is away off, out of the pale of civilization, folks do not always get the stories they hear about him straight, and, I am sorry to say, it looks as though some do not quite want everything to be known just as it is. The item about me on the first page of the BEE JOURNAL for Oct. 18, 1882, which, though true, and evidently published in good faith by the editor, was very liable to create an incorrect impression among bee-keepers. As therein stated, I was quite sick during last summer; indeed, at three different times during the year, my life was dispaired of, and, of course, I did not rear as many queens as I had hoped to be able to. But I think the season's showing is fair, considering the pecular difficulties under which one must labor in cultivating bees in the Orient; and the fact that the "Mt. Lebanon Apiary" had to be wholly created after I came to Beyrout,, at the beginning of last year, which latter fact should be noticed, since parties in America stated in 1881, that the apiary had already been established at Mt. Lebanon. It was during my first illiness in 1882, that Mr. T. B. Blow, of Welwyn, England, called on me in Beyrout, having previously visited me in Cyprus, where I left him when I came to Beyrout to start the apiary there. He, alone, is capable of understanding the numerous difficulties with which I had to cope at that time. As soon as possible earthen pots and cylinders containing bees, were purchased to start up the new apiary, and the work of transferring colonies, rearing and shipping queens began. It was at this time that the weather was unfavorable, cold rains, then later warm rains, with bright warm sunshine between the driving showers. In June I was very sick with cholera morbus again. In July came the sad loss of our only little one. Following this was a serious attack, resulting, the physician said, from too great exposure to the fierce tropical heat of the sun in Cyprus in preceding years.

We had been obliged to "flee to the mountain" on account of the condition of my health, and the Moslem outbreak in Beyrout (which, in the Bee Journal of Aug 16, 1882, was wrongly located in Cyprus). The cool air of the upper Lebanon did me good, and as soon as it was safe I returned to my work. Notwithstanding these interruptions, I was able to send out, during the season of 1882, queens to the number of 340, and 3 full colonies (a small amount of honey and wax were also sold). Of these, 179 were addressed, by express, directly to Mr. D. A. Jones, of Canada, while a number of the rest were sent by mail to parties in England, who, it was expected, would forward a portion of them to Mr. Jones. From the latter I never received any definite statement as to how many of these queens were safely received, but only the assertion that many failed to get through. The cause of poor success in shipping those sent by express, was greatly owing, I believe, to the method of shipping prescribed by the gentleman just mentioned. The only shipments to America made during the past three years, that have been eminently successful, were two lots (one of 30 queens in 1881, and one of 42 queens in 1882), put up in accordance with the plan I proposed upon first landing in Cyprus in 1880. I have met with fair success, sending queens from Cyprus and Syria by mail to different parts of Europe, except when, this last year, some 40 fine Syrian and Palestine queens were seized in London, and sent to Paris (having been mailed at a French post-office in Syria), after which I got them back at the end of about six weeks, all dead!

I sent the first queens by mail from Cyprus to Europe in June, 1880, as can be seen by reference to the *British Bee Journal* for July, 1880, where the method employed is described and the cage illustrated. With this form of cage as a basis, changing from time to time conditions of putting up to, suit the season of year, and as further experience suggested, I think I have, with the help of one modification suggested by a friend in England succeeded in finding out how to be successful in sending queens from the East to distant lands. It must be borne in mind that it is a journey of 3,000 miles, 1,500 of it by sea, in a sub-tropical climate, where hot desert winds are particularly trying for the bees, which are buried in the ship's hold, under tons of other mail matter.

During the coming season I shall try to send some queens by mail from Europe to America. I believe I would have succeeded in doing this, last year, had not the 40 queens been seized in England; for some of these packets were experimental ones addressed to Mr. D. A. Jones. Some of the English postal regulations are very troublesome, and, among these, is that which excludes queen-bees from the mails. The bee-keepers of England ought to protest *en masse*, and keep protesting until permission is granted to send queens by mail. This is surely one reason that has tended to make the introduction of Italian and other improved bees very slow in England. Our British cousins, so progressive in many other respects, have not even a packet post, without which we would hardly think we could get along.

Athens, Greece, March 30, 1883.

Written for the Kansas State Board of Agriculture

Bee-Keeping—Past and Present.

HIRAM J. WARD.

The subject of bee-keeping has claimed the attention of many of our most learned men of ancient and of modern times, who look upon it as a science worthy of their study and their philosophy, finding in the honey bee an insect worthy of better care and attention than it formerly received. Gratwell, Schirach, and Huber the elder, were among those of antiquity who devoted their time and wisdom to the advancement of the knowledge of the habits and character of these insects; and to the latter, especially, we are indebted for much that it is of estimable value in the studies of the naturalist. Although he became blind at the early age of 15, his works gave an impulse to this branch of rural industry in Europe, which caused the management of bees in common hives to be brought to a high degree of perfection; his experiments being conducted by his affectionate wife, and going so far as to count a full colony one at a time. Debauvoy, in the forepart of this century, invented his movable-frame hive, but it was found to be inconvenient for general use, and it has been improved and impoved, until we now have hives to suit all men.

At the present day the bee-keeping world are agitating the production of the *Apis-Americana*, or the "coming bee," that it is hoped will be able to reach the nectar in our deepest flowers—such as red clover, thistles, etc, and will produce one, two or three hundred pounds of honey per colony. The idea of stripes or color has passed away with specialists, and now they breed for business. Occasionally one, who still sticks to the common black bee, warmly defending their excellences. While we all have to agree that they produce the whitest of comb honey, I think I can safely say that nine-tenths of the bee-keepers of to-day would prefer the Italians, for they possess more excellences than any other strain that has been introduced yet; being more docile than the blacks, also much larger, and can carry heavier loads against our strong winds, and breed faster—keeping their hives full of workers. My advice to all bee-keepers would be to Italianize all of the bees in their neighborhood, and then they can be sure of keeping their bees pure. But if they allow any black colonies to be kept within two or three miles of them, they will have to be very watchful if they get any purely-mated queens, because the queen goes out in the air to mate, and the black drones being smaller and swifter, outstrip the heavy Italian; and the consequence is, you have a queen producing hybrid bees. This can be prevented by any judicious apiarist, to a large extent, by rearing drones from the best Italian colonies, cutting all drone comb out of the black colonies, and not allowing them to rear any drones.

The hybrid bees has admirers, too, for they produce beautiful comb honey, and are very industrious; very often storing more than either the blacks or pure Italians; but they are more irascible than the pure of blacks or Italians, often being very annoying to everybody and everything that moves. But anyone can put up with considerable trouble to be rewarded with a lot of choice honey, for they are indefatigable workers. They, too, are larger than the blacks, although they do not all have stripes. Some of them are pure black, while others have stripes across their abdomen; and, in fact, are pure Italians. Yet queens reared from these will have hybrid drones—the drones being what the mother is; if she is pure Italian, her drones will be pure Italian; if she is black, the drones will be blacks; or hybrid, the drones will be hybrids.

While many of our best apiarists advocate breeding from the swarms that store the most honey, irrespective of the color of the queen or drones, others recommend selecting a pure colony to rear queens from, and select their best working colony to rear drones from. I have never reared queens only for my own use, and I have always selected good, large bees, and as near pure as possible, to breed queens from; taking my second best for drones, and preventing any others from rearing drones by removing all drone combs, or cutting the drones' heads off, just before they are ready to hatch; and I have a strain of bees now that winter well, and store as large an average as any in this country. My average for 1882, was 82 pounds per colony, the yard through, although my best went 120 to 140 per hive. One-third of my surplus was in small sections, weighing from 1 to 1½ and 2 pounds each. Honey put up in such packages sells readily, when compared with the surplus boxes that were formerly used.

A word to those who are thinking of investing in bees will be in order now; and it will be the old adage used so often: "Make haste slowly." By this I mean, do not invest in more than two or three colonies at first, for they will multiply faster than you will learn to handle them; and if not properly cared for, your profits will come out on the debtor side. Beginners must have a little adaptation to their work, or they will fail to reach the financial goal; for bee-keeping now, and in the future, is not as it was when "father kept bees." It has been reduced to a science, and will be more scientific in time to come; only those that keep pace with the improvement, and have a liking for the business, will be successful—and bee-keeping is becoming a specialty with hundreds of scientific bee-keepers. It should be a separate occupation, for the simple reason that any one posted in the improvements up to the present, can produce honey cheaper than those who have only a colony or two out back of the smoke-house, which are looked after only in swarming-time, or time to rob, by killing them. Let the same person just raise one more hog, and when fattened and sold, it will buy more honey from any practical apiarist than he would get from his two or three colonies, with less trouble or money invested. Indifferent or careless bee-keepers allow the bee-moth to accumulate, and by so doing, make it more labor for the successful bee-keeper to rear good business bees, upon which he depends for the bread and butter for his family and himself.

Again, where a man has a love for the business of handling bees, it is a very remunerative employment, and will give him valuable lessons of his duty toward his fellow-man; also teaching him that great results often have small beginnings. For instance; each head of clover contains about 60 distinct flower tubes, each of which must, therefore, have a portion of sugar not exceeding the one-hundredth part of a grain. The proboscis of the bee must consequently be inserted into 500 clover tubes before one grain of sugar can be obtained. There are 7,000 grains in a pound, so that for every pound of sugar procured in this way, 3,500,000 flower tubes must be emptied. Honey, however, contains three-fourths of its weight of dry sugar, so that every pound of honey is equivalent to more than 2,500,000 clover tubes sucked by bees. Yet how few people realize, or even have one thought of the amount of labor performed by the industrious honey-bee, in storing a hundred pounds of surplus honey. Nor do they think how rapidly they increase, for it is known that the queen has deposited as many as three to four thousand eggs in 24 hours; and in 21 days they all emerge from their cells perfect bees, there being about 35,000 to 40,000 workers in a good colony. It would only take a few days to rear a full colony if they did not work themselves to death; but the entire colony becomes new, every two to three months during the working season, owing to the amount of honey obtained and distance traveled in gathering it. Some people may think this a wild assertion, yet after 14 years' experience, I know what I speak; and to any one that does not believe it, I would say, try it yourself, as I have. By getting an Italian queen, and introducing her into a black colony, in three months they will not find a single black bee in the hive if the queen is a pure Italian; and it is a conceded fact that the Italians are the best, all things considered, for general use, although we have in the United States six different strains of bees—the common black, Italian, Holy Land, Syrians, Albinos and German—all having their friends, although the Holy Land and Syrians are very cross, while the Albinos are the most quiet in handling, and also slower in honey gathering, often not storing enough for their own use; while it is claimed that one cross of either two of these kinds improves them, with the possible exception of Italians, that are susceptible of weeding out a little in order to secure good honey gatherers.

I think for the specialist the Langstroth hives are the best, because they are capable of tiering up, by putting one above the other in time of a large honey flow, and when the apiarist is taxed to his utmost to give the bees room to prevent swarming, and thereby secure the best results in surplus honey. They are also well adapted to the storing of comb and extracted honey; and being in general use, all of the supply dealers have hives, frames and sections, in the flat, ready to put together, singly or in any amount wanted; and specialists are adopting the same hive, in order that they can order, on short notice, surplus sections, and have them fit without trouble. I have used the original American hive, patented by H. A. King & Co., of New York city; the hive being 15¼ square by 21 inches high, outside measurement, with nine movable frames in them; the top part of the frame being 1½ inches wide, forming a complete floor or the top to the hive, when all of the frames are in, and each frame has a slot ⅜ by 2 inches through them, for the bees to pass through into the surplus boxes above, and it is my opinion, that for farmers or those who want only a few colonies, that the American is the best hive they could use; but would advise any one who intends to invest in bees, to visit a well-established apiary and look at the different hives in use, and there he could learn more in one day, in a practical way, than he would learn from books in a month. Our most practicable apiarists advocate the necessity of students spending one season in the employ of a specialist, thereby learning the trade, so to speak, at the end of which time they are competent to take charge of an apiary of 80 to 100 colonies, with reasonable certainty of making a success of it; and I can speak for all bee-keepers, and say that, as a class, they are always willing to give advice to beginners, or if visited, will show them the advantages of the different hives that they may have in use. It will repay any one for such a visit, to see the different kinds of bees, for almost all bee-keepers have two or more strains, and they are all looking for the coming bee, the *Apis-Americana.*

Farmington, Kansas.

For the American Bee Journal.

Queen Rearing, Raspberry Honey, etc

P. P. N. E. PELISSIER.

I was surprised, on reading an article by W. C. Jennison, on page 119. He must use hard lumber to make his frames. Let him use soft pine and he will find that by pulling a little on the fine wire, or passing a piece of iron or hard wood over it, it will be imbeded sufficiently deep, so as not to interfere with the scraping of wax or propolis.

As for queen-cells, if he lets his bees swarm naturally, he does not need to cut queen-cells over wires, and thereby spoil his well-built worker-combs; he has simply to destroy those that he does not wish to hatch. If he wants to rear queens, the best way is to have frames without wires, fasten one or two bars (according to depth of frame) inside of the frame, parallel with the top and bottom bars; fasten a strip of foundation to each of these bars, and set one or two of these frames in the centre of the hive containing the best queen. In less than 24 hours, the comb foundation will be drawn out and every cell will contain an egg. Every bee-keeper knows how to have the queen-cells started, and he will have no difficulty in cutting them out large enough so that they can be simply fastened on another frame with a common pin, which will save the mutilating of combs.

The statement that Mr. Jennison clipped from the *American Cultivator* is wrong, so far as red raspberries are concerned. The flowers of red raspberries yield whiter, nicer and better-flavored honey, and in larger quantities than even the much-praised white clover.

The bees are good judges of honey; they will invariably gather from the bloom that yields the richest nectar, even if the secretion is not so great as in other bloom. Here, the white clover is of spontaneous growth; it may be seen everywhere; if a fire runs into the forest, fire-weed and white clover will generally grow the same summer; fire-weed makes excellent fall pasturage for bees. It yields honey from Aug. 15 to Oct. 1.

I have hundreds of acres of white clover and red raspberries within reach of my bees, who invariably desert the white clover the moment raspberry bushes begin to bloom.

Bees are in splendid condition, wintering finely; mine were put in the cellar on Nov. 10, and look as if they could bear confinement three or four months longer; this, I attribute, to the thick, wholesome honey they have in the hives; honey gathered from raspberry and goldenrod. We are having the coldest and dryest winter in the memory of the inhabitants.

Every one seems to have set his mind upon a standard frame. Why not adopt a frame 10 inches deep by 15 inches long, inside? Such a frame will contain 150 square inches, which is about the average size of frames in use. The Langstroth is too shallow to winter successfully in the North, and almost all other frames are too deep for the production of comb honey with success; besides, if we run for extracted honey, by using a second story, we have a hive of just the right height; whereas, if deeper frames are used, I would not like to use a second story, in a locality exposed to high winds.

Pelissier, Quebec, March 10, 1883.

For the American Bee Journal.

Section Racks, Crates and Separators.

W. H. B.

The leading questions, just now, are, What sized sections, and What kind of a rack or crate shall we use, to hold the sections in place on the hive, for comb honey? After experimenting considerably with different kinds of crates, I have settled on this as *the* rack. It is very simple; if made properly will adjust itself to the top of the hive, although it may not be level; it is just the thing for tiering up, whether used with separators or not. It suits me, and all that I have shown it to, and who have used it, think it about right.

For sections, 5 or 6 inches deep, slit out the stuff 1½ or 2 inches wide (turn up edgewise, to nail together); for small sections not more than one inch wide. (I prefer to use sections running parallel with the frames, for several reasons). I cut two pieces ¼ inch longer than the length of the sections, in a row, from front to back of hive; these are the side pieces for the rack. Next cut the end pieces ½ inch longer than the width of the section, from side to side of the hive, adding to them the thickness of the side pieces. Nail them on the ends of side pieces with one nail in each corner. This will let it adjust itself to the top of the hive. Cut some sticks, as long as the width of the hive, one inch wide, and as thick as the space between the top bar and the top of the hive; place these sticks crosswise of the hive, so that they will come under the ends of the sections, when they are placed on; (these sticks will kill less bees than putting on a whole crate, filled with sections, at once, and I think it is more easily cleaned). Lay on the frame and fill it with sections and separators, if you use them, key up with a stick, which is as long as the length of the rows of sections, 1 inch wide and ½ inch thick, having one edge chamfered off. For tiering up, place a block on each side of the top of the lower section rack, just long enough to hold the upper rack at the proper height. The bees will work in sections without separators sooner than with them (especially if the sections are small), but I find objections. One year, I fastened the sections together (without separators) before placing them on the hive; took them off and sold them, just as they came from the hive, and being fastened together, I could not assort them. I had something over 7,000 lbs. in this condition, and I lost 3 cents per pound on the lot, by not having it properly assorted, and my customers would have been better pleased. If, in a crate, there is some dark honey on the outside, it is a hard matter to make a customer believe it is white clover in the middle. I find, when separators are not used, with large sections, and honey is not coming in rapidly, the bees are sure to fill one side at a time of the combs, near the outside of the section crate; this causes the combs to curl into the next section; this makes trouble, and often the outside section will not be filled on the outside. With separators we have none of this trouble. Small sections will be filled nicer without separators than larger ones, and sometimes so that they can be glassed.

Oran, N. Y., March 7, 1883,

For the American Bee Journal.

The Best Hive for all Purposes.

DR. J. S. MC ALLISTER.

My experience differs considerably (from what would seem to be that of Mr. Heddon's) in regard the Langstroth frame, and my experience in bee-keeping dates back nearly 40 years, when we kept from 30 to 100 colonies in the old-fashioned way. I have traveled some, and am acquainted with many very successful bee-keepers who, together with myself, do not consider it safe to keep a valuable colony of bees in the Langstroth hive (the year round). As far as surplus honey is concerned, either comb or extracted, I believe that there can be as much secured with side storing as top storing, with the proper sized frame and hive to hold them, and I think of all the sizes in use, the "American" comes the nearest to the most practical size.

With a plain hive, about 2 ft. long, a bee-keeper can have 8 frames for a brood nest, and room at each side for 18 one-pound sections, making 38 at a time, by placing them in edgeway to the brood frames, and leaving room on the top for as many more as he may wish. I like but very little upward ventilation. The past winter I wintered 24 out of 25, the brood nest being sealed and packed nearly as tight as a drum, except that the entrance was open about 2 inches; the colony that died was ventilated the most. I use tight top-bars and winter on the summer stands. On page 601, of September number for 1882, headed an Amateur's Success, is a partial report for what I done with 3 colonies. The full increase was 27, and with the honey to take out of the hives this spring, will make the surplus honey the product of the 3 colonies and increase, nearly 500 pounds. I, like many others, have the pure unadulterated Italians, and I am starting an apiary at a point where there are no other bees kept for more than 20 miles, in any direction, for the purpose of keeping them pure.

Columbus, Neb., April 20, 1883.

Practical Farmer.

Making Ready for the Harvest.

W. G. PHELPS, M. D.

Nothing goes so far towards assuring success in bee-keeping as a state of preparation for the forth coming honey season. This preparation consists not simply in having surplus hives ready for expected swarms. To be prepared in every sense of the word, means, 1, well-populated hives; 2, accessible surplus department; 3, the use in boxes of starters or comb foundation; 4, right management at the right time.

Taking up these essentials, in the order named, let me explain. A well populated hive means a hive well crowded with bees at the opening of white clover bloom. This can be accomplished best by the stimulative method, and by feeding up. You may ask, "does it pay?" Yes, tenfold; particularly if your bees are short of natural stores, and are gathering none from without. Not that the bees convert the sugar fed them into honey, but rather into bee muscle, which, taking wing untiringly, gather nature's sweets, to store it, in more than compound ratio, for the owner. A normal colony of bees contains not less than 20,000 of these industrious insects. The younger portion of these assume the duties of nurses and wax-workers, while the other workers become the veteran honey gatherers. A less number of bees than above stated will store up for their owners much less honey, in proportion, than if up to or in excess of that. What I mean is thus illustrated: Two colonies, each consisting of 12,000 bees, would, as ordinarily kept, store no honey in the caps. The same bees combined in one colony, would yield, even by the simplest management, from 50 to 100 pounds. The reason is this, about so many bees are necessary to keep up the required heat of the hive and do the "chores," or household work, so as to speak. They will not enter the surplus boxes, unless conditions as regard heat, wax-working, etc., are all right. They are less able to defend their house against robber bees, and many stay home for this purpose who would otherwise become honey gatherers.

2. Accessible surplus department.—Let our bees be ever so strong, if the depository for the surplus comb honey be not accessible, the bees will be loth to enter it. To work and transform the wax (a secretion of their bodies) into the wondrously-formed honey comb, requires a heat of at least 85 degrees.

3. Use of "starters" or comb foundation.—"Starters" are simply pieces of nice natural comb fastened with melted wax to the top of the box. In the absence of combs, comb foundation may be fastened to the top, in the same manner. The use of it can be relied upon to increase the yield of honey from at least 25 to 50 per cent. It encourages bees to commence work in the boxes, and saves them a vast amount of work in comb building.

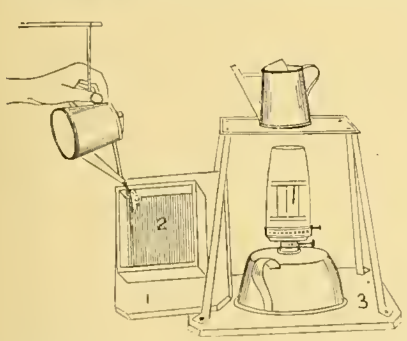
4. Right management at the right time.—Many who keep bees make a great mistake in putting on boxes long before it is expedient to do so. Wait until the clover bloom is just ready to open, and then beware of putting on too many at once. Meanwhile keep all openings in the honey board well closed and the cap filled with dry leaves, chaff or cut straw, to prevent loss of heat from the breeding department.

Galena, Md.

For the American Bee Journal.

Putting Foundation in Sections.

M. C. SMITH.



The accompanying engraving shows a machine for putting in full sheets of foundation in section boxes, which I made in March, 1881. I used it last season to put in over 3,000 full sheets, with entire success. The table which holds the pot, is made of tin, cut 7 inches square; the edge is turned over and pressed down to give strength. The legs are cut out of tin, 1½ inches wide; the edges turned over and pressed down, and long enough to raise the table ¾ inch above the lamp, to prevent smoking. Any lamp will do to melt the wax. The pots are gill cups, with oil can spouts attached, as shown in the cut. A common oil can, with handle, will do as well as the pots. The block, to the left, is to hold the foundation in the centre of the section, while being fastened, and is made of ½ inch board, 8 inches long, by 6 inches wide. No. 2, cut to fit inside of the section, and of the right thickness to hold the foundation in the centre. Fasten No. 2 in the centre of No. 1. Cut the foundation to fit without warping; place it in the section on No. 2; hold the block in the left hand, in such a manner as to allow the drop of wax to run down along the section and the edge of the foundation. From 1 to 3 drops will fasten it on both sides and top. Leave the foundation ⅛ of an inch from the bottom of the section. Go to your tinsmith with the above description; he will make the tin work, lamp and all, for less than 75 cents; you can make the wood work yourselves.

This is the way I put foundation in brood frames by a Press. When the wax is ready, dip the board in the wax once; now you have two thin sheets. Lay one on the dies; on this put the wired frame; now lay on the other sheet, close the die book, and press the two sheets in one. By this plan you press the wire into the centre of the foundation. By this method the wire will not cut the foundation.

Last season I prepared between 300 and 400 frames, as described, and the bees built every one out into as beautiful combs as I ever saw. You can hive a bushel of bees on these frames with success, every time.

Starkville, N. Y.

For the American Bee Journal.

Saunders Co., Nebraska, Convention.

The Saunders County, Nebraska, Bee-Keepers' Association, met April 28, 1883. The fact that a large amount of honey was being imported into this State was stated as an argument for a greater effort toward home production. To this was coupled the statement that 200 colonies to the square mile could not gather all the honey.

A report of members on wintering showed 252 colonies put into winter quarters. Out of that number 48 colonies perished. Many apiaries were not represented.

There has been a heavy loss of bees during the winter in this county—some largely engaged in the pursuit losing from half to two-thirds of their colonies.

C. C. TURNEY, *Pres.*
J. J. BURTCH, *Sec.*

Convention for Northern Iowa.

There seems to be a number of bee-keepers in the northern counties of Iowa. Why could not a meeting be held at some central point on the C. M. & St. P. R'y.? How many vote aye? J. G. BENNETT.

Emmetsburg, Iowa, April 27, 1883.

Special Notice.—We will, hereafter, supply the Weekly BEE JOURNAL for 1883 and Cook's Manual in cloth for $2.75, or the Monthly and Manual in cloth for $1.75. As this offer will soon be withdrawn, those who desire it should send for the book *at once.*

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

When to Pack Bees for Winter.

Will Mr. James Heddon please answer the following queries in the BEE JOURNAL: What is the best time for packing or preparing bees for winter? What is your opinion in regard to packing them in the forepart of December, in such a winter as last winter has been? I would like the opinions of as many leading bee-keepers as possible on those queries.

Bristolville, O. J. S. BARB.

ANSWER.—I have never yet been able to prove satisfactorily to myself, that very early packing was a benefit. By all means, I should aim to pack my bees at such a date that they would have a good chance to fly several times, and the first, immediately after the packing, and get thoroughly acquainted with their new quarters. I have maintained for years that I do not get any advantage from late breeding, and I do not want any undue early breeding either.

Wired Frames.

Please answer the following questions in the BEE JOURNAL:

1. In wired frames what size of top bar do you use, and which is the best way to punch holes in them?

2. How many wires for a Langstroth frame, and how near to the end bars should the first wire be?

3. How near should foundation fill the frames?

4. Is it not a difficult job, even with Given's wiring frame or machine, to get the wire just right, so that the end bars just so go in?

5. Should the wire be stretched tight, or must some allowance be made for it to give, when the die book is closed, so that it will not break? H. W. FUNK.

Bloomington, Ill.

ANSWERS.—1. I use a top bar ⅜x⅞, and bore them on a boring machine that bores all the holes, in about ten bars per minute.

2. I use only eight wires per frame, and I use them all vertically. The end ones should not be further than ½ inch from the end bar.

3. I maintain, against Mr. Root and others, that it is better and safer against all bulging, that there be a space of ⅛ inch between the foundation and each end bar, and ¼ to ⅜ at the bottom. Heat expands the wax sheets.

4. I use the Given press for all wiring, and with the lye process, I always make up all my frames com-

plete, and wire them before I put in the foundation. I now have no trouble. Two of my students are, this moment, in an adjoining room filling wired frames (a steady jog) at about three or four to the minute, and the perfection of the work, makes it fun for all who witness it. I wish every reader could see this work.

5. No; the wire should be woven quite loosely, as the action of the dies will take up the slack when the pressure is brought to bear upon it. These answers are applied to wiring with No. 36 wire for machine pressing, and not No. 30 and hand pressing.

Transferring Bees.

1. Regarding your new method of transferring bees, where do you place the old and new hives, after the first drive?

2. If I unite the second drive with the first, will they cast a swarm before the honey season begins?

Devizes, Ont. JOHN S. RIDDELL.

ANSWER.—1. After the first drive we place the new hive directly on the old stand, and the old hive a few rods away to a new stand, unless we mean to put the second drive into the same new hive, thus avoiding any increase, when we place the old hive only a few feet away, and then off to one side, and partially behind the new hive.

2. No; you will not do this driving till the honey season is just opening.

Freaks of a Queen and Bees.

I am still desirious of "more light." The queen that I spoke of as "coming to," on April 2, is "performing" curiously.

1. On my first examination, after she was introduced to the little colony in the nucleus hive, I found that she had commenced to deposit her eggs "all in order," i.e. only one in a cell. Upon a further examination, to-day, I found that she was distributing them quite freely through the few combs, that are in the hive, but instead of one egg, there are from one to five. How can this be explained?

2. Here is another wonderment to a beginner like me. In looking over my colonies, to-day, I found one that had been queenless, but they have provided themselves with a young queen, that probably is not more than 48 hours old, and in the whole hive there is not a singly egg or larva to be found. What can be done with this young queen? There are no drones in my apiary, how am I going to save this colony and queen?

H. B. HAMMON.

Bristolville, O., April 25, 1883.

ANSWERS.—1. This can be accounted for in the following ways: 1. Drone layers (unfertile queens) are apt to lay a plurality of eggs in a cell. 2. Some otherwise good fertile queens sometimes have this fault. 3. A very prolific queen will often do so when cramped to a small comb surface. I presume this is the trouble in your case.

2. You have a plain case of supersedure of a "played out queen." The bees reared this young queen from the eggs of the old one, which old one departed about the time the bees began the new queen. When the new one hatched, of course there was no brood young enough to be in the egg or larval state. You are about in my latitude, and should have drones flying in a few days. As queens often become fertilized 10 to 15 days (and sometimes, we are told, 20 days) after birth, there is hope for this queen, and my way would be to let the matter alone ten days or two weeks, and then examine the combs for eggs.

SELECTIONS FROM OUR LETTER BOX

A Cold Wave.

We have had it cold now for nearly a week; the mercury standing at 18° above zero, two mornings. Yesterday we had 2 inches of snow with a searching wind. As elm and soft maples were in bloom a week ago, I set the bees out of the cellar, only to get them caught by this cold wave.

G. M. DOOLITTLE.

Borodino, N. Y., April 26, 1883.

Queen Rearing—Killing Tree Worms.

The time is near at hand, with us, when apple trees will be in blossom, and that is about the time when many of us begin to sort our nuclei, for queen rearing, that we may have queens ready, so that our strong colonies may be divided and be in readiness for the honey harvest. Other hives may have queens that are old, or for some other cause need superseding. I have been in the bee business for 27 years, and have spent much time and money in rearing queen bees. All who have but a few colonies of bees, and especially for those who have more and wish to improve them, should procure the new book of Mr. Alley, which gives the results of 22 years experience in queen rearing. This tells all about how to get good, hardy, prolific queens whose progeny will be hardy, healthy and good honey gatherers. It talks good sound sense, and is what every bee-keeper should have before him. When I sat down to write, I thought I would tell something about what a hard time we used to have, killing the worms on our apple trees, but, as I have run away from that subject, I will only show how we destroy them now, as it is so much nicer than the old way. If we do not kill the worms, they will kill the trees. We arm ourselves in the following manner; first, we want a pole long enough to reach the highest nest; on the top end tie a rag about as large as a dish-cloth, or smaller; next we want some lye in an iron kettle, or something convenient to carry it in; the lye need not be very strong, only strong enough to crack the skins of the worms; dip the rag end of the pole into the lye, and give them one sop, when they are in the nest. If you have never done this, you will be surprised to see the amount of worms you will kill in a few hours. I prepare the lye in the following way: Fill a kettle one-half full of wood ashes, and fill it up with water; set it on the stove and bring it to a boil; this will be strong enough.

W. H. BALCH.

Oran, N. Y., April 23, 1883.

Bees Strong and Ready for Harvest.

My bees are all right. I had 114 colonies in the cellar; and have lost six; some weak colonies I have doubled up, reducing them to 100 good and strong. I am now ready for the honey harvest. J. STEWART.

Rock City, Ill., April 28, 1883.

Prospect for Honey Never Better.

The prospects for a good honey harvest in this locality was never better. There is an abundance of white clover, catnip, etc., which will be in bloom by the middle of this month. My bees are all in good condition, and are very busy on the fruit bloom, which is now at its best. I had two fine swarms,—one yesterday and one to-day—the earliest I have ever had. I am now busy forming nuclei and dividing up, so as to be ready to take in the rich harvest when it comes.

ELVIN S. ARMSTRONG.

Jerseyville, Ill., May 2, 1883.

Burned Up.

My house, with all its contents, has been destroyed by fire. My bees got a scorching, and one hive was burned up. They had wintered well. I lost one for want of food, and one was burned up, leaving me 13 colonies now. WM. MOWBRAY.

Sarnia, Ont., April 28, 1883.

Preventing Stings, etc.

Mr. J. H. Stephens, Riverton, Iowa, wishes to know an antidote besides whisky, to prevent the dreaded "business end" of his bees, when walking in the yard. He says that the bees have a natural dislike to him, which can be avoided by taking a small dose of whisky, peppermint or anything that will change the smell of his breath, which the bees seem to dislike, and which exemperates them to stinging. Wash the hands and face with the same ingredient, sweetened with a little sugar; this will impregnate the skin with odoriferous perspiration, which the bees seems to admire, instead of the objectionable perfume the body has during manipulation. In the spring of 1882 I bought one 3-frame nucleus to begin with. I

increased them to 6, in good condition for winter. On the first warm day in April all were doing well, with the exception of two which were weak in numbers. One was robbed, through my own carelessness, so that I have five to begin the season with. I extracted, in the first week of September, 80 lbs. of goldenrod honey. I would like to ask G. B. Jones, Brantford, Ont., if the three entrances spoken of, on page 210, are more servicable to winter, than one on a tight bottom-board? Jos. M. Wismer.
Jordan Sta., Ont., April 28, 1883.

Bee-Keeping in Ireland.

You can scarcely imagine with what interest I have re-read the able articles, during the past year, in the American Bee Journal. Do not let me miss any number of this volume. Long may it be cater for us all. We have had a very long, wet cold winter, and it has tried our plans of wintering. I hope we may all have a good honey season. Wm. Ditty.
Newtownards, Ireland, April 19, 1883.

Bees Breeding Up.

My bees came through in first-class order. They are breeding up to very strong colonies at the present date. All that were put up, either in cellar or in chaff receptacles on the summer stands, with chaff box cushion cover, lived and are in good trim. Those left upon the summer stands unprotected, and with tight honey-board, took Heddon's "pollen disease," and about 10 per cent. died.
E. L. Briggs.
Wilton Junction, Iowa, April 30.

Still Cold in Northern Ohio.

There is a cold north wind to-day, with a clear sky; the ground was frozen this morning. The past week has been cold, with two or three mornings that the thermometer ranged from 27° to 30°. Bees have flown but little, and the maples, elms and willows that were furnishing them such fine forage have, of course, been blighted.
P. F. Twitchell.
Andover, O., April 29, 1883.

Problem of Wintering Bees Solved.

The past winter has been the coldest ever known here; notwithstanding which, bees have wintered uncommonly well. I put 32 colonies in the cellar on the first of November, and took them out April 3. All came out in good order, after the five months confinement. They did not have a flight for 15 days, before being put into the cellar, last fall. The cellar, that my bees wintered in, during the past winter, was very cold; potatoes froze solid; and for weeks at a time the mercury stood at 12° below freezing, and I expected to lose heavily; but all came out right. I have been so uniformly successful with my method of wintering bees for the past 13 years, that I think that, to my satisfaction, the problem is solved. I have never lost but one colony, in the cellar, that did not starve to death, and that one was queenless, and contained only a few old bees, when it was put in. The result of my experience, in wintering bees, entirely fails to coroberate many of the scientific theories advanced by writers on that subject, and I am content to follow the course that has uniformly proved successful with me, regardless of what science may prove, if not sustained by experience. In a future article I will briefly give my method of preparing for wintering bees.
O. E. Cooley.
Ridgeway, Iowa, April 26, 1883.

Un-poetic Bee-Culture.

We are having but little of the poetry of bee-keeping in this state. A poor honey season, followed by a winter, quite as disastrous to the bees here as was the winter of 1880-81. Many bee-keepers have lost all. My own loss is about 20 per cent.
W. J. Davis.
Youngsville, Pa., May 1, 1882.

Honey and Beeswax Market.

Office of American Bee Journal,
Monday, 10 a. m., May 7, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The nominal price of extracted is 7c. for dark and 9c. for light—here. The supply is abundant and sales are slow.

BEESWAX—None in the market.
Al. H. Newman, 923 W. Madison St.

CINCINNATI.

HONEY.—The demand for extracted honey is very good, and arrivals are slow. We pay 7@10c. on arrival. We sold, since last October, more than 600 barrels, and our stock is exhausted, while our customers are relying on us for supplies. Hope our friends will supply us. No demand for comb honey, and prices nominal.

BEESWAX.—Arrivals of beeswax are good, and prices range from 30@35c. for a good article.
Chas. F. Muth.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand is light and it is not now probable that all of the comb honey can be sold before a new crop comes. Prices are very irregular and generally low: 15@16c. for white, and dark unsalable. Extracted, very little trade is being done in it. 7@9c. is about the market.

BEESWAX—35@36c.
R. A. Burnett, 161 South Water St.

SAN FRANCISCO.

HONEY—Buyers are readily obtained for choice comb or extracted at full figures, but off qualities meet with slow sale.

White comb, 14@17c.; dark to good, 11@13c.; extracted, choice to extra white, 8½@9½c.; dark and candied, 5@7½c.

BEESWAX—We quote 30@33c.
Stearns & Smith, 423 Front Street.

ST. LOUIS.

HONEY—Dull; light jobbing sales only. Comb at 10@14c.—Strained and extracted at 7@7½c. Couple lots of poor Comb sold at 10c.

BEESWAX—Sold lightly at 35@36c.
W. T. Anderson & Co., 117 N. Main Street.

CLEVELAND.

HONEY—Is a little lower, and at the lower price it has moved off a little better of late. 1-lb. sections of best white sold at 18½@19c.; second grades, 1-lb., 17c.; 2-lb. sections a little slow at 17@18c. Extracted very dull at 9@11c.

BEESWAX—None in market.
A. C. Kendel, 115 Ontario Street.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—Our supply is gone; we have none to quote.
Crocker & Blake, 57 Chatham Street.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the Bee Journal.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1 year, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with $6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For four subscribers, with $8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with $10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

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☞ Our stock of back numbers of this volume are now getting very low. Please look over your numbers, and if any are lacking, send us a postal card, giving the date of those you want, and we will send them, if not all gone. We give this notice, because, last year, several left it until the end of the year, and then requested us to send the missing numbers. Then it was too late, the numbers being all gone. Look them over *now*, and you may get them completed.

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Foul Brood Pamphlet.—Wishing to be relieved of sending out my pamphlet on Foul Brood, I have made arrangements with Mr. T. G. Newman to supply them to the bee-keeping fraternity desiring them.

A. R. KOHNKE.
Youngstown, O., April 25, 1883.

◆

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

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☞ Mr. Alley's new book on Queen Rearing will hereafter cost $1.25

We have received his Circular and Price List for 1883, which contains 32 pages, and make a nice appearance.

◆

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

Convention Notices.

☞ The Iowa Central Bee-Keepers' Association will hold their semi-annual meeting at Winterset, Iowa, on Friday, May 11, 1883. All interested in anything pertaining to bee-culture are invited to attend, and bring anything that will be of interest to the bee fraternity.

J. E. PRYOR, *Sec.*
A. J. ADKISON, *Pres.*

☞ The Southwestern Iowa Bee-Keepers' Association will hold its annual meeting at the apiary of L. E. Mercer, Lenox, Taylor county, Iowa, May 26, 1883. Meeting called at 10 o'clock sharp. Forenoon: Election of officers. Afternoon: Work in the apiary, when any question, with regard to handling bees, will be practically explained. Accommodations will be provided for visitors from a distance. W. J. OLIVER, *Sec.*

☞ There will be a meeting of the Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association on Tuesday, May 15, 1883, at Mr. E. Whitlesey's, two miles south of Pecatonica, Winnebago County, Ill.

J. STEWART, *Sec.*
Rock City, Stephenson County, Ill.

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☞ We have a few copies of our pamphlet entitled "*Bee Culture*" left, and have reduced the price from 40 to 25 cents each, or $2 per dozen.

◆

Cyprians Conquered.

All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's "Conqueror Smoker" did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham.

G. M. DOOLITTLE.
Borodino, N. Y., Aug. 15, 1883.
18A4t 5B1t

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☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

WANTED, by one who has had quite a considerable experience in bee-culture, to engage with a practical apiarist for the present season. No correspondence solicited but by those who are masters of the business. Compensation required according to services rendered. My age is 64—health good. Can go anywhere on short notice.
Address, L. N. TONGUE, Box 43, Elroy, Wis.
19A 1t

1883. JOSEPH D. ENAS, 1883.
(Sunny Side Apiary,)
Pure Italian Queens, Bees, Colonies, Nuclei,
EXTRACTORS, COMB FOUNDATION, &c
19c6t Address, Sunny Side Apiary, NAPA, CAL.

A SPLENDID OFFER!

We will send our NEW BOOK ON QUEEN REARING and Prof. COOK'S new edition of his MANUAL (both contain 550 solid pages of reading matter) by mail, on receipt of $2.25; or both Books, and a tested Queen of any race, for $3.75.

HENRY ALLEY, Wenham, Mass.
19A 2t

J. V. CALDWELL,
Cambridge, Henry Co., Ill.
Manufacturer of Comb Foundation and Dealer in supplies for the apiary. New circular now ready. Send for it. 7A12t

BEE-KEEPERS, before ordering your APIARIAN-SUPPLIES send for our large illustrated catalogue, sent free to any address.
E. Kretchmer, Coburg, Iowa.
13A22t5B4t

Given's Foundation Press.

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.
D. S. GIVEN & CO.,
1ABtf HOOPESTON, ILL.

E. T. LEWIS & CO., Toledo, Ohio,
Manufacturers of the U. S. STANDARD Honey Extractor (new improvements), and all other Apiarian Supplies. Send for circular. 17A 5Btf

Sweet Clover
AND OTHER SEEDS.

Having a large stock of the new crop of Sweet Clover Seed, I can fill orders at 30c. per pound, $4 per peck, or $15 per bushel.

Also, all other SEEDS for HONEY PLANTS,
ALFRED H. NEWMAN,
923 West Madison Street, Chicago, Ill.

CHEAP! CHEAP!
LANGSTROTH HIVES!
SIMPLICITY HIVES!

All kinds of hives and surplus comb foundation, etc., etc. Having superior advantages for the manufacturing of hives and of procuring lumber low, I can furnish very low rates.
Send for descriptive circular.
A. D. BENHAM,
10Atf Olivet, Mich.

WISE people are always on the lookout for chances to increase their earnings, and in time become wealthy; those who do improve their opportunities remain in poverty. We offer a great chance to make money. We want many men, women, boys and girls to work for us right in their own localities. Any one can do the work properly from the first start. The business will pay more than ten times ordinary wages. Expensive outfit furnished free. No one who engages fails to make money rapidly. You can devote your whole time to the work, or only your spare moments. Full information and all that is needed, sent free. Address STINSON & Co., Portland, Maine. 8A1y

Golden Italians Again!

One Golden Italian Queen, warranted purely mated, $1.50. One purely mated and tested, $2.50. One pure Queen, not warranted, $1.00.
All the above Queens are of the finest stock in the country. I sold over 300 last season, and had but one complaint. Full colonies ready to divide, for $10.00; safe arrival guaranteed.
17Atf L. J. DIEHL, BUTLER, IND.

20 Colonies of Italian Bees
FOR SALE CHEAP,
In Langstroth Hives and all in good condition.
Address,
JAMES O. PARKER,
19A1t WANNETKA, COOK Co., ILL.

OPIUM Morphine Habit Cured in 10 to 20 days. No pay until cured.
J. L. Stephens, M. D., Lebanon, O.
18A4t

OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

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OLDEST BEE PAPER IN AMERICA THE AMERICAN BEE JOURNAL ESTABLISHED IN 1861

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

Poisoning Troublesome Bees.

We have recorded many cases where persons, who object to bees being kept near their premises, have resorted to poison to rid themselves of a supposed or real annoyance.

For several years we had from 50 to 100 or more colonies of bees on the lot behind the BEE JOURNAL office, and in the fall, when there was nothing for the bees to gather, they became very troublesome to neighboring grocery stores. In one case they invaded the store and drove out not only the customers but the clerks and the proprietor also. The latter came to us with his sad complaint and protest, and only regained possession of his store by the use of brimstone. It was hard on the bees, but they were trespassers, and we entered no protest. In order to avert further trouble with our neighbors, as well as the city authorities, the bees have been taken into the country.

Now, suppose, that these bees had been poisoned, what an amount of trouble it would have entailed!

We have reports from California and other localities where trouble has been experienced in the same direction—and, in some cases, poisoning were resorted to.

Our attention has been called to this matter afresh by the following article, kindly sent us by some unknown friend, in a copy of the *Young Scientist*, published in New York. The editor remarks as follows:

CAUTION TO BEE-POISONERS.

From notices in several of our exchanges we learn that some thoughtless and ignorant persons, urged by so-called scientific men who certainly ought to know better, are attempting to destroy by poison such bees as annoy them. Aside from the fact that such a practice is contrary to law, to good morals, and to right feeling, those who think of adopting this vile practice should remember that it is not at all impossible that they may take the life of something much more important than a few bees. Some human being may fall a victim, and then the poisoner may find himself in the clutches not only of a guilty conscience, but of the law. Nor is it necessary that man, woman or child should find access to the vessels set out for the destruction of the bees; unless under extraordinary conditions the bees will carry to their hives, before they die, an amount of poisoned food sufficient to render the honey in their combs virulently poisonous.

This is not a mere surmise or theory, but a fact, which, some years ago, we demonstrated clearly and fully to our own satisfaction. The records of the experiments were unfortunately destroyed in the great fire which consumed the "World Building" last January, but the results were so clear and unequivocal that we can give them from memory without any material inaccuracy.

In these experiments we established small colonies of bees in locations where they could not interfere with other colonies, and selecting times at which food was scarce, we fed them upon syrup to which poison had been added. In every case we succeeded in destroying the bees, but it was only in a very few cases that we failed to get poison from the honey in the hive, and in these cases the bees took the poison only when no other source of food supply was open to them. In many cases the bees that carried the poison to the hive did not seem to suffer till long after the young bees were all dead; in some cases the queen was amongst the very first to fall a victim, and next came the young bees, just emerged from the cells.

We used about a dozen different varieties of poison in our experiments, and we fed it to the bees at distances from their hives varying from three feet to a mile and a half. The latter, of course, was easily done by means well known to every bee-hunter.

When arsenic or Paris green was used we found no difficulty in detecting arsenic, by means of the usual chemical tests, in the honey taken from the hive. A little of the honey added to the liquid in a Marsh's apparatus readily gave the beautiful characteristic arsenical mirror, and some of the honey fed to mice killed them very quickly.

Nor is this to be wondered at. The honey-sac of the bee is not a true stomach, but rather a muscular bag, which exerts very little action on its contents. This is readily seen in the case of the delicate odors of flowers which are retained by the honey in the comb after it has passed through the honey-sac of the bee. Hence, we have clover honey, basswood honey, buckwheat honey, etc.—all readily recognizable after they have been deposited in the hive. As might be supposed, therefore, when the bee has but a short distance to go, it invariably succeeds in depositing several loads of the poisoned honey in the hive before it succumbs. When the distance is very great the case is different, and many bees will then die on the way, or just after reaching their hives. But in ordinary cases it is only those bees whose hives are quite near that prove an annoyance, and they are the ones that are least affected.

To attempt to poison bees, therefore, is to attempt to mix poison with a common and much-valued article of human food, and the consequences may be of the most serious nature. We feel assured that all that is necessary, in order to put a stop to the practice, is the diffusion of accurate knowledge on the subject.

◆

Bees in Southern Florida. — The Florida *Despatch* of last week contains the following item:

Mr. J. H. Hendrick, the apiarist of Cedar Key, has commenced transferring his Italian bees to a more Southern locality. Some time since he carried a colony to his new home at Indian Rocks, Clearwater Harbor, where he will move his large apiary as soon as the honey season is over.

◆

☞ After getting a Binder in which to place the numbers of the BEE JOURNAL, as received, Mr. F. L. Dresser remarks as follows: "The Binder for the Weekly BEE JOURNAL is received, and I am very much pleased with it. It doubles the value of the JOURNAL, which is saying a good deal."

Bee-Keepers' Guide.

Prof. Cook has just issued the Tenth Thousand of his Manual of the Apiary. The Professor issued the first edition himself (a 30c. pamphlet). Then the six succeeding editions were published at this office, and 9,000 copies have been sold in six years, which gives substantial evidence of its deserved popularity. The preface to the present edition reads as follows:

> In 1876, in response to a desire frequently expressed by my apiarian friends, principally my students, I published an edition of 3,000 copies of the little unpretending "Manual of the Apiary." This was little more than the course of lectures which I gave annually at the college. In less than two years this was exhausted, and the second edition, enlarged, revised, and much more fully illustrated. was issued. So great was the sale that in less than a year this was followed by the third and fourth editions, and, in less than two years, the fifth edition (seventh thousand) was issued.
>
> In each of the two following years, another edition was demanded. In each of these editions the book has been enlarged, changes made and illustrations added, that the work might keep pace with our rapidly-advancing art.
>
> So great has been the demand for this work, not only at home and in Europe, but even in more distant lands, and so great has been the progress of apiculture—so changed the views and methods of our best bee-keepers, that the author feels warranted in thoroughly revising and entirely recasting this eighth edition (tenth thousand.). Not only is the work re-written, but much new matter, and many new and costly illustrations are added.
>
> In this edition, the author also assumes the duties of publisher. In bidding adieu to the old publisher, I wish publicly to express my high appreciation, and deep sense of obligation for the able manner in which Mr. Newman has performed his share of the work. I shall still hope for his wise counsel and advice, from which I shall surely profit in the future as in the past. For this, as also for the able opinions of many other of the first apiarists of America and Europe, I wish to express most grateful acknowledgments.
>
> It is the desire and determination of the author that this work shall continue to be the exponent of the most improved apiculture; and no pains will be spared, that each succeeding edition may embody the latest improvements and discoveries wrought out by the practical man and the scientist, as gleaned from the excellent home and foreign apiarian and scientific periodicals.

It is, perhaps, needless to say that this Manual covers the entire ground of apicultural research, and that it is practical and progressive throughout. Prof. Cook is an entomologist, a botanist, a passionate lover of the honey bee, and his Manual is an admirable work for all—valuable alike to the beginner and the more advanced apiarist.

"Artificial Honey."

Mr. E. C. Jordan, of White Sulphur Spring, Va., has sent us the following from Mrs. Dr. Loockerman, of Alexandria, Va., describing the methods of making "artificial honey," as given in the Receipt Books of that State:

> It is a well-known fact to those even of a small degree of experience in the matter, that honey, taken from the hive in warm weather, soon deteriorates; that it loses its finest qualities, by the separation of its sugar and the fluid composing it, the resut of vinous fermentation. The honey collected by bees is sometimes found to be actually poisonous (see numerous authors), while the honey we present to the readers of the *Old Dominion* is so complete a concentration of pure saccharine as to be entirely removed from all liability of becoming acidulous. It is not known to be subject to any other change by age than that of becoming granulous or candied. And, hence, in the estimation of those who have been favored with this receipt, it deserves the title of Superlative Honey. Put one pint of water and a quarter or third of an ounce of alum into any nicely cleaned kettle, over a bright fire, and bring to a brisk boil. Set the kettle off, and into the solution therein put four pounds of number-one crushed or granulated sugar. Stir together, place over the fire and bring it to a sharp, brisk boiling for one or two minutes; remove from the fire and strain through a light cotton cloth. In cold weather use a little more water. When cool and flavored, let it stand two days before using.
>
> FLAVORING FOR SUPERALTIVE HONEY.—Into a pint bottle put one ounce of Jamaica ginger, pulverized, some 12 or 15 drops otto of rose, and one pint best alcohol or New England rum; shake well once or twice a day for two or three days. A medium sized teaspoonful of the clear extract to five pounds of the honey gives it a most exquisite flavor.

And after all it is but an *imitation* of the pure article, though it costs as much or more than the genuine.

* * *

☞ The Fremont, Mich., *Indicator* says that Mr. Geo. Hilton laid a couple of boxes of nice honey on its editorial desk last fall, and adds: "It is remarkably fine, and a dish of it will make a man forget almost all his troubles." That is the way to do it. *New* honey will soon be here, and a nice box taken to the editor of the local paper will tell others where to get it.

The Time of Honey Bloom.

Mr. Alfred Mottaz, Ottawa, Ill., sends the following request:

"Will you please give in the BEE JOURNAL, the usual time of the blossoming of the principal honey plants?"

The best we can do in this line, is to give the following from Prof. Cook's new Manual:

ANNUALS OR PERENNIALS.

April—Skunk cabbage.

April and May—Danderlion, strawberry, ball, and black or blue sage of California.

May—White sage, of California, and seven-top turnip.

May and June—Horehound, of California, sumac, of California, coffee berry, of California, horse mint, of the South, false indigo, and lupine.

May to August—Ground ivy or sill.

May to Fall—Cow pea, of the South.

June—Stonecrop, of the South, mammoth red clover, California figwort, of California, and hemp.

June and July—White clover, alsike clover, sweet clover, horehound, oxeyed daisy (a bad weed), bush honeysuckle, and partridge pea.

June to August—Matrimony vine, sage, and motherwort.

June to Frost—Borage. cotton, silk or milk weeds, mustard, rape, St. John's wort, and mignonette.

July—Corn and teasel.

July and August—Basils or Mountain mint, catnip, asparagras, Rocky Mountain bee plant, Viper's rugloss (blue thistle), blue vervain or verbena, white vervain or verbena, and marsh milk weed.

July to Frost—Boneset, bergamot, figwort, giant hyssop, malva, iron weed, Culver's root, and Indian plantains.

August—Buckwheat, snap-dragon, touch-me-not or swamp balsam, great willow herb fire weed.

August and September—Golden honey plant, and large smart weed.

August to Frost—Spider flower, golden rod, asters, marsh sunflower, tick-seed, beggar-ticks, Spanish needles, and rattlesnake root or tall white lettuce.

SHRUBS OR TREES.

January to May—Manzanita, of California, and willow, of California.

February to June—Gall berry, of the South.

March—Orange, of the South.

April—Box elder or ash-leaf maple, red or soft maple, poplar or aspen, silver maple, and Judas tree, of the South.

April and May—Willows (also trees) and Judas tree, of the South.

May—Shad-bush, alder, maples, sugar maple, crab apple, hawthorns, fruit trees—apple, plum, cherry, pear, etc., currant and gooseberry,—wistaria vine, of the South, Chinese wistaria vine, of the South, Japan privet, of the South, varnish tree, of the South, acacia, of the South, black gum, of the South, bladder-nut, persimmon, of the South, saw palmetto, of the South, and buckeye.

May and June—Barberry, grape vine, tulip tree, sumac, buck thorn, of the South, and black mangrove, of Florida.

June—Magnolias, of the South, honey locust, wild plum, black raspberry, locusts, and red raspberry.

June and July—Blackberry, and sourwood, of the South.

July—Button bush, basswood, and Virginia creeper.

June and July—Cabbage palmetto, of the South.

July—Blue gum, of California, and catalpa.

July and August—Pepper tree, of California.

July to September—St. John's worts.

August—Late sumac.

August and September—Indian currant or coral berry.

August to Frost—Red gum, of California.

August to December—Japan plum, of the South.

August to January—Germander or wood sage.

The Season in England.—Mr. A. Pettigrew gives the following very doleful account, in the *Journal of Horticulture*, of the condition of bees in England, on account of the cold weather and frosts in the early spring:

> In the changing and uncertain climate of Great Britain showers and falls of snow are not uncommon in the month of March, and sometimes we have had such in April. Experienced bee-keepers know that while snow is on the ground or around an apiary, bees should never be allowed to leave their hives. During frosty weather they will not venture out, but when the thermometer rises and snow begins to melt, the bees venture to fly, and in doing so many perish. They seem to be dazzled and bewildered by the light, and rapidly fall into the snow, and become motionless in a moment. The heat of their bodies melts soft snow, causing them to sink about an inch in it. When snow is crusted on the surface, bees, on touching it, lose the power of their feet and legs by a kind of paralysis, and many of them are unable to take wing, roll on to their backs, and speedily perish. Many colonies are weakened—some are destroyed by loss of bees in snow. This is well known.
>
> The severity of the present frost, and its continuance in the middle of March, is a new experience to British bee-keepers. The past winter was mild and favorable for bees. At the end of January colonies were strong, and the bees of many of the hives in this section of the country began to breed; then when snowdrops and crocuses came into flower, the bees in great numbers were seen on them. Some of the strongest colonies had two and three seams of brood sealed, and doubtless much brood unsealed. At the beginning of March we had several days of cold and cutting winds, so cold that bees would not leave their nests for food; afterwards severe frost set in, bringing down the mercury of the thermometer at nights below 20°; one morning, the 10th of March, to 13°, or 19° of frost. Snow fell in Cheshire on the 16th of March. If the frost had come a month sooner, little harm would have been done to colonies.
>
> In my time we have never before experienced such severe and continuous frost in the brood-rearing season, and therefore I cannot speak from experience as to the extent of the injury probably done to the brood. We know that bees dislike cold winds even in April and May, and in order to protect their brood then from chilling winds, they contract their doors with compact masses of their own bodies. In the months of April, May and June, bees spread the eggs of their queens as widely as they can be covered and hatched, and when cold winds come, they endeavor to keep them out by blocking or corking their doorways. In cold weather bees are very helpless creatures.
>
> In winter and early spring bee-masters will do well to give them all the protection possible. Before the present frost set in colonies were in capital condition, and fruit trees covered with blossom buds, giving bee-keepers good hopes of early swarms and great results, and therefore this severe and unexpected weather is the more disappointing.

Sweet Music.—All of the following songs and piano pieces come to us, in a package, sent by the well-known publishing house of Oliver Ditson & Co., Boston.

Very many ballads of the "Lilly Dale" order have, of late years, been given to the public, but, very few of them have such smooth, beautiful music as that which belong to the song "Under the Willows," by C. Connolly. Another charming musical tid-bit by the same author is "That first little kiss he gave me," an artistic song and dance in the play of "My Sweetheart."

Still another beauty is "Sleep, Baby Sleep!" a charming lullaby by Angelica McCoun Fellowes. "The Train," by Molloy, is a song of our hurrying time, and "Oh, that I had wings," by Havens, will sound well in church. "Emmy Polka," by Granado, is one of the pieces played by the Spanish students. "Heart and Hand Waltz," by Le Baron, is a good arrangement. "Sunshine Polka," by Ida Hurley, is a pretty piece of brightness.

☞ *The Biographer*, is the title of a new serial, the first number of which is on our desk. It is published at 23 Park Row, N. Y., and, of course, it is illustrated with engravings of the persons whose biographies it contains. This initial number has 25 biographies, comprising some of the most prominent persons of the present age. We welcome this new candidate for popular favor; it will make an exceedingly valuable book of reference.

"Homicide and Suicide, in the city and county of Philadelphia, Pa., during a decade, 1871 to 1881, inclusive," is the title of a pamphlet laid on our desk "with the compliments of the author," John G. Lee, M. D., Coroner's Physician. It contains many interesting incidents and considerable statistical information.

New Mexico Celebration.—We have received an invitation to attend the Tertio-Millennial (third of 1,000 years) Anniversary Celebration, including a comprehensive Mining and Industrial Exposition, of and for the Rocky Mountain region, which will be held at Santa Fe, New Mexico, July 2 to Aug. 3, 1883.

It will present the characteristics of the three civilizations which have occupied New Mexico and the adjacent territory, since its first occupation by the Spaniards, in 1550, to the present time, and illustrate the progress of the several centuries.

It is said that the first European who ever visited the region now known as New Mexico, was Cabeza de Baca, who was wrecked off the coast of Texas in 1531. He was struck with the appearance of the country, and in 1541 returned with an expedition headed by Coronado, and, as nearly as can be ascertained, some of the party settled at Santa Fe in 1550.

Frank Cushing, who created so much interest in the East, last summer, with a party of Zuni Indians, will have quite a large band of them at the Santa Fe Tertio-Millennial Celebration, with a large collection of curious things manufactured by them. This will prove one of the special attractions.

We should be delighted to attend this grand celebration, but shall be unable to do so.

☞ We have received a small tin can for honey, from Mr. W. M. Hoge, of London, England, such as are now being used extensively in that country. The cover fits tightly on a flange, and can be easily and instantly pried off with a nickel, but cannot be knocked off. Its large mouth makes it very suitable for candied honey.

CORRESPONDENCE

For the American Bee Journal.

How the Bees Have Wintered.

G. M. DOOLITTLE.

By turning to page 741 of the BEE JOURNAL for 1882, the reader will see how a part of my bees were left on their summer stands to winter, and a part were put in the "bee cellar" there described.

We have had it very cold here for the past two weeks, till within a day or two. On the morning of April 30, Skaneateles Lake (16 miles long and 2 miles wide) was frozen over nearly the whole length of it; the mercury standing at 18° above zero. As is my custom, I examined the bees that morning, looking in every hive, and counting the spaces that the bees occupied between the combs, as well as to see that all had sealed honey. The examination showed that out of the 43 wintered on the summer stands, 11 were dead; 5 of which had died since the past cold spell commenced. Of the 32 left, 10 were good, strong colonies, 10 fair, and the remainder weak. Of the different methods tried, those having the full entrance left open, and a little upward ventilation through two quits, with the cap to the hive packed with chaff came out the best. These, also, had a board stood up in front of hive to keep out the snow, and to prevent the wind from blowing in at the entrance and the sun from shining on the same. The next best were those having full entrance and enameled cloth over the top; and those having a little lower ventilation, and a plenty of upward, the poorest of all. The colony having the Texan queen was the first to die, but as I have two other queens from the South (one from Louisiana, and one from Georgia), which, with their bees, came through the winter in splendid condition, I think that the climate in which queens are reared has little, if anything, to do with their wintering qualities. The best colony, of those wintered out of doors, is the one having the old Palestine queen, which numbered 8 good, full spaces of bees, while 7 is the highest of any besides.

Having described those wintered out of doors, I will next speak of those wintered in the cellar. There were 37 full colonies put in, and a few queen-rearing nuclei, as an experiment, which was not counted last fall.

Of the few nuclei, about one-half died; the temperature was not high enough for mere a handful of bees, as this was about what each one was. The thermometer marked 42° in the cellar during all the winter, after it became settled, and I think, if it could have been kept at 52°, these little clusters of bees might have wintered quite successfully. As elm and soft maple were in bloom on April 14 to 18, the bees were put out, and, of the 37, all were alive and in good condition except 3, which were rather weak. They gathered pollen at once, but the cold spell put a stop to operations, and also showed that we are not always sure of warm weather when pollen becomes plenty. By referring to page 741, as above, it will be seen that I left the entrance to a part of those put in the cellar, as on the summer stands, a part with full entrance, a part raised on ½ inch blocks, and the remainder raised on inch blocks. Upon examination, the other morning, I found that those having small entrances occupied, on an average, 5 spaces, and the bottoms of the combs were quite moldy. Those having the full entrance open averaged 6 spaces, with a little mold on the combs. Those raised on ½ inch blocks, averaged 7 spaces, with the combs nice and bright; while those raised on inch blocks, averaged but 5½ spaces, yet the combs are free from mildew. The three weak ones are all among those having the small entrances. It will also be seen, by referring to page 741, that the bees were to be put in at four different times; as the weather became suddenly cold about Nov. 22, those that were to be put in Dec. 1, were put in without further delay, so that I did not carry out that part of the experiment as I intended. After those were put in on Nov. 3, the rest had a fine flight on Nov. 10; while those put in last, had a snow storm on them, with some cold freezing weather, but after careful watching all winter, and the above examination, the difference is not enough to favor either, early or late setting in. Toward the latter part of the winter the cellar seemed to become quite damp, which appeared to effect the nuclei; but as far as I could discover, the full colonies were not injured thereby.

As the past winter has been a very severe one, I think that I am better prepared to winter successfully than I was last November. Especially do I recommend raising each hive on ½ inch blocks, when wintering in the cellar. This seems to allow all the moisture to pass off, so that the bees are kept quiet, and the combs clean and bright.

Regarding out-door wintering, my loss has been so great that I am hardly entitled to an opinion in the matter; yet, from past observation, I shall try largely, the coming winter, a full width entrance, with a little upward ventilation through two or three quilts, covered 4 inches deep with chaff; no holes left open in cover, as I believe all that is needed is what air can pass through the cracks at the top of the cap.

I should have said, in my last article, regarding stimulating in the spring, that about the first of May, according to the season, all colonies not having 2½ frames of brood were shut up by means of the division-board, etc. In this unfavorable spring, to begin so early would do no good, for the best colonies in my apiary do not have enough to amount to one full frame of brood.

Borodino, N. Y., May 2, 1883.

For the American Bee Journal.

Wintering Bees in Cellars.

H. V. TRAIN.

Mr. J. B. Miller, of Mechanic Falls, Me., asks, on page 138, of the present volume of the BEE JOURNAL, that some one, who has wintered bees successfully in cellars, should "give plain simple directions how to do it."

In December, 1883, I purchased two colonies of bees, in boxes, and moved them 20 miles on a sled; since that I have wintered bees every winter, save one. For the first five or six years I experimented in a variety of methods, and lost more or less every winter, and it was usually more. Then I commenced cellar wintering, and have never lost 5 per cent. in any one winter since; and for the last five years I have not lost 1 per cent. in any one winter; and I have wintered from 125 to 155 in the one cellar each year. I have become so confident of success that I would not give 1 cent per hive to have them wintered safely through any winter, cold or mild, provided they are in normal condition in the fall.

If any man wants to winter bees on their summer stands, in clamps, in caves, in dark bed-rooms, in old houses, or in straw piles, I have no advice to give. I have experimented in these to my sorrow; and if any of my friends ask me for advice about wintering bees any where, save in a good cellar, I can only say: "Don't." This, of course, applies only to our climate.

My cellar is under the main or upright part of my house; and is 18 by 28 feet, and 7 feet high. There is also a cellar under one wing (the kitchen) 16 by 26 feet, separated from the bee cellar by a wall, and connected with it by a door. The last named cellar is used for family purposes, and we pass through it, in going to the bee cellar, when it is not proper to open the outside door. The bottom of the cellar was very dry sand, and is made firm by the use of pounded stone, and smooth by quick-lime plaster, so that water will disappear very rapidly when poured upon it. I set my hives four deep, directly on the top of each other, and a little apart, so that I can, if need be, take down any one tier and not disturb any other tier. The hives are set facing aisles 4 or 5 feet wide, so that I can pass down the aisles with my small bed-room lamp and see all the entrances at any time, day or night; which I always do from two to five times every 24 hours.

To prepare them for the cellar, I take off the enameled cloth and all the cushions, and put in their places, a piece of porous cloth, or, what I like better, a piece of matting from tea-chests (they cost nothing, when I can get them), and put the cover directly on this; which makes upward ventilation enough for a cellar. My thermometer hangs on a post, midway of the cellar, and about half-way from the floor to the ceiling. I never allow it to fall below 40°, and never rise above 50°, if I can control it; but I would rather for it to rise above 60° than fall below 40°. Below 40° means dysentery or death, in my experience. The cellar is always kept perfectly dark; and the bees are never disturbed unless it becomes absolutely necessary.

To ventilate the cellar, there is a tin pipe 4 inches in diameter, extending from near the bottom of the cellar to near the point where the pipe from the sitting room stove enters the chimney, and there enters the chimney. The tin pipe is made air-tight through its whole length, and air-tight where it enters the chimney, so also is the stove-pipe; so that when ever there is a fire in the stove there is a heavy draft out of the cellar, and we always keep a fire in the stove when the bees are in. I consider this draft an essential condition.

My last improvement in letting air into the cellar, is a box made of four boards, 16 feet long and 12 inches wide, nicely made so as to be water-tight, with both ends open. This forms a pipe 10x12 inches inside. One end of this pipe is fitted into a window so as to admit no light. The other end extends 16 feet into the cellar, and is raised about a foot higher than the end in the window, so as to carry all the water from the melting ice out of the window. At the outer end of this pipe there is a gate by which it can be partly or wholly closed at pleasure. Whenever the weather is warm, this pipe is filled nearly full of ice or snow its whole length, so that all the air that enters the cellar comes over and among blocks of ice for 16 feet, which affects its temperature materially. Over the inner end of this pipe I hang a black curtain to exclude all light.

I have often contemplated the feasibility of a sub-earth pipe to act in conjunction with the ice pipe, so as to let the air through either at pleasure. I think it would make a perfect arrangement, but have never tried it for want of strength to dig or means to hire. With my present arrangement I have no trouble unless I neglect some of the following rules:

1. Keep the bees breeding late in the fall, by feeding if necessary, and have them well cushioned, the entrance partly closed, and otherwise kept warm.

2. Put them into the cellar early, before any frost gathers on the honey, to crack the cappings.

3. Watch very carefully, and never let the thermometer sink to 40° (it had much better never come below 44°), and never let it rise above 50°.

To cool off the cellar, when the weather outside is colder than 40°, let in as little air as will keep the bees alive, and keep ice in the pipe. When the cellar gets too cold, shut off the air, and, if necessary, carry in a kettle of coals from the stove. This last is a good practice, whenever it can be done and not make the cellar too warm.

4. Never take the bees out until they can get pollen, unless it is for a flight, and then put them back the same day. I never take mine out unless they get the dysentery, and then only the sick ones, and have never done that but a few times, with a few.

5. Exercise good common sense, and you will have no trouble.

I have now 131 colonies in the cellar and two nuclei. They were put in Nov. 13; and, up to this date, they have not made any noise that could be heard 10 feet from the hive, excepting one colony, which was inadvertantly set under the ingress pipe, where the cold air fell almost directly on it, and they took the dysentery early, and I tried the carbolic acid and sugar; it seemed to check it for a time, but they are noisy again, and I shall give them a flight the first warm day. All the rest are in fine condition, thus far. The thermometer marks 48° this evening, and all is quiet along the whole line.

I will close by saying to all the wise ones, that, in my opinion, if their bees never get any sour honey, they will never have dysentery; and I do not care how much pollen they have, either. If any doubt my statement or opinion, let them carefully examine every hive that has the disease, and see if they do not find sour honey, if they find any. Mind another thing, if in cellar; the honey outside the cluster gets cold enough to condense the breath of the bees; that honey will almost always sour, more or less, and give dysentery.

Mauston, Wis., March 17, 1883.

Western Missouri Convention.

The Western Bee-Keepers' Convention was held at Independence, Mo., April 28. Jas. A. Nelson, of Wyandott, Kans., president, on taking the chair, said:

GENTLEMEN:—I am glad to meet so many bee-keepers on the present occasion. I have nothing of special importance to offer, but think the wintering problem deserves attention, and will give you some items of my own experience.

I put into winter quarters 66 colonies on the summer stands, all but 11 of them in Langstroth hives, and nearly all of them had chaff cushions, 6 or 8 inches thick in the upper stories; I have lost 8 colonies in all, 3 in Langstroth hives, and 5 in hives having deeper frames. A few weak ones are still among them, and since the first of April, some of the strongest colonies have dwindled, and one has superseded the queen. The young queen was fertilized and laying on the 20th inst.

Another matter—small, it may be, but bee-keeping is made up of small matters. I notice that many persons do not save the bits of comb which are necessarily made, about an apiary. The demand for beeswax is great and increasing, and it behooves us all to save and produce all we possibly can. It is no great trouble with a wax extractor to place the bits of comb into it, and when once full, to heat it and let the wax run into a pan placed to hold it. A wax extractor will soon pay for itself in the amount of wax that might otherwise be allowed to go to waste.

The question is often asked, "Will it pay to use foundation at present prices." I answer yes—in an ordinary season it will pay to use it even at a cost of $1 per pound, or to use wired frames filled with it, even if they cost 25 cents each. I have proven it by actual experiments in my own apiary.

In thanking you for the unexpected honor of being elected president of this association, allow me to express the hope that our present meeting may be pleasant and profitable to us all.

The members made individual report on wintering, as follows:

NAMES.	Size of Frames.	No. of Colonies Fall, 1882.	No. of Colonies Spring, 1883.	Where Wintered.	Pounds of Honey Consumed.
S. M. Salisbury..	11x14	86	81	Sum.Stan.	10
	9x17	14	10	"	10
James A. Nelson.	9x17	66	58	"	10 to 12
J. D. Meador.....	10x14	55	15	"	10
P. Baldwin.......	10x13	140	125	"	10
L. W. Baldwin...	10x13	207	207	Cellar	5
F. J. Farr.........	10x13	146	135	"	6
James H. Jones..	10x13	105	98	"	6
C. M. Crandall...	10x13	75	74	Sum.Stan.	12
James D. Aid	10x13	9	9	"	10
Jonathan George	10x13	61	58	Cellar	6
D. G. Parker.....	10x15	60	50	Sum.Stan.	
David Seass......	9x13	195	194	Cellar	10
J. Y. Detwiler....	9x17	2	2	Attic	

Mr. S. W. Salisbury, secretary of the convention. read the following paper:

Mr. President and Members of the Western Bee-Keepers' Association:

On fixing the time for our semi-annual meeting, which has now arrived, our members generally shared the desire to learn from each other how their bees had passed the winter, and how well prepared they were for active summer work.

In this latitude I am confident that bees winter best on their summer stands, especially if they are protected with a mat or quilt over their frames, or with a piece of burlap or carpeting that will keep the chaff or leaves, which should half fill the upper story, from getting between the frames. They must, however, in any situation have plenty of food, and I am confident that 20 pounds of honey is the least possible amount that will safely bring a colony through winter and the first two months of spring. Where bees can have an opportunity to fly every month, and generally several days during each month, as they usually do in this latitude, I think it must be obvious that bees will suffer less by natural frosts than by confinement in a cellar.

But an unusually severe winter, with long continued cold, will necessarily produce damaging effects upon bees on their summer stands. Let the thermometer stand at zero, or thereabouts, for two weeks at a single time, and chaff hives are insufficient protection. Let this cold be continued for 30 or 40 days without interruption, and every colony must suffer, while a large percentage will be ruined. An occasional mild day, which, without inducing bees to fly, enables them to move among the frames and replenish their stores for present use from different parts of the hive, tides them over another cold spell and enables them, with health and vigor, to greet the invigorating rays of the sun on every salubrious day of the winter solstice. In colder latitudes, cellar wintering must be preferable; in warmer latitudes cellar wintering would be intolerable.

Every bee-keeper has his own fancy for hives. Every novice in bee-keeping tries to invent some new arrangement for a hive superior to all others. Not long since such an inventor exhibited to me a device to prevent drones from building drone comb, which he declared with great sincerity and earnestness to be wholly his own. He positively affirmed he had not got the idea from any book whatever, and extorted from me the promise not to make public his device until he had obtained a patent. In imagination he could see millions in it, notwithstanding he is the only person in the world who ever knew of drone bees making any comb at all.

But nearly every bee-keeper, in some easy or natural way, becomes attached to some particular kind or form of hive, and as he makes the business a specialty disposes of or discards others and develops his favorite kind. We thus see nearly every prominent apiarist in the country (all, however, with movable frames) using a different style of hive.

The Langstroth, undoubtedly, has the call at present, being exclusively recommended by several prominent bee journals, but I very much doubt its general adaptation or desirability. The length of its frame, 17 inches, and depth only 9 inches, makes it objectionable for successful wintering and springing of its inmates. It is undoubtedly too large and barn-like. Going between that and the American frame, I have found, by an experience of 20 years, that a similarly constructed frame, 14 inches long and 11 inches deep is best.

Little attention is usually given to the ventilation of hives, especially in summer. Not unfrequently the front of a hive remains for weeks covered with bees while they hang in festoons from the bottom board, and all for the want of ventilation. Let a hive, thus covered, be raised one-quarter of an inch from the bottom board, and kept so raised by blocks under its corners, and every one of this idle crowd will go inside the hive or into the fields to work in less than a single hour.

Its a mistake to say that bees cluster outside the hive for the sake of swarming. They never stop work for that purpose, but when they cannot sufficiently ventilate their hive to prevent danger of their comb melting down, they have sufficient sense to go outside, and thus save their stores.

One of the most provoking, and probably the most fatal malady among the bees, in this locality, is dysentery. We know its effects, but we can only guess at its cause. To say that it has diminished numbers, or cold weather, or impure honey, does not satisfy the anxious inquirer; for some colonies in the cellar are afflicted with it, and as the sick ones die, of course their numbers diminish; while the claim that impure honey causes it, is answered by the fact that other colonies, feeding from the same source of supply, are not affected in the least. I would suggest faithful inquiry and observation among the members of this association as to the real cause or causes of dysentery among our bees and the resultant remedies for the disease.

It is always noticeable that some colonies build up and increase much faster in the spring than others. To have them all full of bees and ready for the honey harvest is the great desideratum of the apiarist. The most prosperous colonies, early in the month of May, can suffer the loss of a frame of brood without apparent injury, while the impetus, energy and strength given to a weak and struggling colony, by the insertion of such frame, is almost wonderful.

I deem it of the utmost importance to have every colony in an apiary as nearly equal, both in stores and bees, by the middle of May, as possible, and this equality can easily be effected by the interchange of a few frames between them. Of course all queenless colonies should be supplied with queens before this time, and weak ones united.

The question as to how many bees can profitably be kept in one place is not readily determined. I see it noticed that in some parts of Germany several thousand colonies are frequently found in a single compact neighborhood, while in this country the weight of authority seems to place a much smaller limit to the number that can profitably be kept in one locality.

Let us, if possible, add something to the solution of this question at our future meetings.

Since brimstone has, in a great measure, been discarded, the question of increase enters seriously into the calculations of the bee-keeper.

How to overcome the great disasters of winter and spring without detriment to the crop of honey? If he works for increase he can obtain no surplus honey, and consequently no revenue, as the demand for colonies is limited and prices very unsatisfactory.

The natural tendency of bees is to swarm, not only once, but twice or three times. The parent colony is thus left without workers, and can produce no surplus. The second and third swarms are often too small to obtain a livelihood until the coming spring, while the first swarm can only furnish a small amount of honey to the bee-keeper. He must, therefore, restrain swarming, and keep his forces united in order to obtain the best results.

As time for swarming approaches, I remove two frames of brood and bees from each of the most prosperous colonies, being very careful not to take the queen, and uniting eight of these frames in a single hive, thus construct one-fourth as many new colonies as I have in my apiary. By giving these new colonies a queen-cell ready to hatch, I soon have this number of full and prosperous colonies, all capable of collecting surplus stores. The old colonies being furnished with frames of foundation, have such additional work to perform that in a majority of cases they forget to cast a swarm that season. Such swarms, however, as do issue, I furnish with two or three frames of brood from the hive whence they came (first removing all queen-cells therefrom), and then place them on the old stand. The parent colony I at once break up into nuclei for queen rearing, or unite the frames with others into full colonies.

Other questions readily present themselves for consideration, but I desist, with the remark that it is probably a good thing that we do not all think exactly alike.

The discussion which followed was based mostly on points made by the essayist.

L. W. Baldwin says he prefers cellar wintering. He placed 207 colonies in the cellar the 1st of December, and wintered every one. He returned them to the summer stands on the 1st of March, and found, by weighing, that they had consumed only five pounds and one ounce of honey each; while out of doors they would have consumed ten or twelve pounds each.

J. D. Meador prefers small frames of 10 or 11 inches depth; he would not use the Langstroth frame; he thinks bees prepare themselves for swarming by quietness and fattening; he thinks bees on summer stands must have the sun to shine on their hives in winter; he lost heavily this last winter of such colonies as he did not properly prepare for winter.

P. Baldwin says bees prepare for swarming by clustering and resting, and that they will do so inside of the hive and in boxes if not on the outside; he does not want foundation nor old combs for swarms. His bees do best in making their own comb.

D. G. Parker wants foundation to prevent excess of drones, if for no other purpose, because bees construct drone comb largely, especially in swarming time.

The 20th day of September was designated as the time, and Independence as the place for holding the next convention. Committees were appointed to prepare premium lists for said occasion, and to make arrangements for a two days' session.

Thanks are extended to Mrs. J. D. Meador for providing a sumptuous collation, which was served in an adjoining room in the court house, and heartily relished.

Sundry other miscellaneous business was transacted and convention adjourned. S. W. Salisbury, *Sec.*

☞ The Southwestern Iowa Bee-Keepers' Association will hold its annual meeting at the apiary of L. E. Mercer, Lenox, Taylor county, Iowa, May 26, 1883. Meeting called at 10 o'clock sharp. Forenoon: Election of officers. Afternoon: Work in the apiary, when any question, with regard to handling bees, will be practically explained. Accommodations will be provided for visitors from a distance. W. J. Oliver, *Sec.*

For the American Bee Journal.

Burying Bees in Clamps.

BENJAMIN FRANKLIN.

In the Bee Journal, page 177, is an article by Mr. Wm. Bradford on clamp wintering and ventilation. On April 19, I visited two box-hive men who both wintered their bees as described in the first part of Mr. Bradford's article.

One of the men is very old, and has kept bees for a number of years, always with success, whenever he has buried his bees. He showed me the places where they wintered last winter. He had taken out 12 colonies the day before I visited him, and the bees were flying out of the hives and carrying in pollen, and were very strong. The hives were clean and not "spotted," in the least; the combs were all clean and bright, with plenty of honey. He winters about 10 or 12 colonies in a place.

After packing straw around the hives, he puts straw on top, then some dry dirt on the tops of the hives, then covers over with boards to keep out the wet; then covers all up with earth, 3 or 4 inches deep. The hives came out as dry as when put in. He gives no upward ventilation; the hives are sealed up as tight as the bees can do it. There is a hole in the side of the hives, 5 or 6 inches from the bottoms. The hive sets upon a 4x4 joist, in the bottom of trench. He puts straw or buckwheat chaff on the bottom. He said, one fall, he had 100 colonies of bees; he put them in on Oct. 1, and they remained there until April 1; when he took them out they were in fine condition, without loss. Some of the colonies were very small, but they came out with plenty of bees and honey.

He covers up his trenches with boards, and that saves digging new trenches every fall. He cleans out the straw sometime before he wants to put the bees in, and lets them dry out. It does not take a very large place to bury 100 colonies. It saves carrying them in the cellar, and is not half the work that it is to pack them in chaff.

I shall have him help me bury some of mine, next fall, if all is well. I have tried almost all kinds of ways, but lose some in any way.

I thought I would write this, and, perhaps, it might give some light on the wintering subject. Some may think they are right, but when they test their ways of wintering, year after year, they may fail in some years. This man told me he heard so much about wintering in chaff, that in the winter of 1881-82, he packed all of his in chaff, except 5 or 6 which he buried, and these were all he had left for seed. One of his neighbors, who had buried his bees, in other winters, thought he would let them go that winter, and lost them all (some 80 colonies); all the man had to depend on for a living, and an old man at that.

One of my neighbors winters his bees, packed in chaff. He uses an extra box, and sets the hive in the bottom. There is about 1¼ inch of space under the frames; the entrance is 4 inches long and ⅜ high; he leaves the quilts on, the same as he puts them on after taking off the surplus boxes. The bees wax them down as close as they can; he has nothing over the frames, and does not cut holes through the combs. His bees come out good.

In the year of 1881-82, when I lost 75 colonies, his came out without loss. There was no chance for upward ventilation, for the quilts were all covered with propolis, and waxed tight to the frames.

Franklinton, N. Y., April 30, 1883.

For the American Bee Journal.

The Standard Langstroth Frame.

G. M. ALVES.

Mr. James Heddon, on page 224 of the Bee Journal, advocates 17⅜ inches as the proper length of the Langstroth frame, on the sole reason that it is so given by Mr. Langstroth, in his book published about 20 years since. Now, I submit four propositions why 17⅝, and not 17⅜ inches, should be universally accepted as the standard length.

1. There are more Langstroth frames in use of that length than any other.

2. The largest manufacturers of hives, and the greatest number of them, have adopted this size.

3. This size will exactly take eight standard one-pound sections—a very important consideration with those who prefer to take their honey in frames.

4. The editors of the principal bee periodicals have, and do now, give this size as the standard, and on the authority of the Editor American Bee Journal, Mr. Langstroth himself has approved the change. See American Bee Journal for 1882, page 251.

Now, if these propositions are all true, and Mr. Heddon cannot successfully disprove them, the conclusion to all who appreciate their weight is, that the standard Langstroth frame should be, and is 17⅝ inches in length.

Now, in the light of the above, I must submit that Mr. Heddon, in selling and advocating a frame 17⅜ inches in length as the standard Langstroth frame, is in this particular detrimental.

Henderson, Ky.

[As stated by Mr. Alves, in 1878 we referred this matter to Mr. Langstroth, and he replied that he now considered 17⅝ the correct measurement for the length of the standard Langstroth frame. See Bee Journal for 1878, page 427. As Mr. Alves remarks, the fact that this size of frame is better adapted to the use of cases to hold 8 small sections, should be very potent in deciding the point in controversy. This small difference often makes serious trouble.—Ed.]

For the American Bee Journal.

How to Press and Mount Flowers.

F. A. HUNTLEY.

In reply to Mr. N. Z. Hutchinson's inquiry in the Bee Journal of April 25, asking how to press and mount flowers for study, I will give the method by which the students of the Iowa Agricultural College make up their herbariums.

In the first place the collector should have everything in readiness for collecting, pressing and mounting his specimens before he begins the work. The tools and apparatus for collecting consist of a good sharp pocket knife to be used for cutting and trimming, a gardner's trowel, or a good strong butcher-knife for digging, as it is sometimes advantageous to have a portion of the root with the flower, and a botanizer's can, or some other convenient vessel, for carrying the plants and keeping them from the dry air and sun. The collector will find it greatly to his advantage to have a good pocket lens with him, to enable him to examine more closely the various parts of his specimens. He should have a note book in which he may note down anything that he might want to look up, at some other time; and if he wishes to classify his specimens while out, he should have a good classifier's manual with him. The one used here, and probably the best in the United States, is the one edited by Dr. Asa Gray, the well-known professor of botany in Harvard University. It is always easy to classify specimens while they are fresh, as all parts may then be easily discerned.

The apparatus for pressing consists of two wide boards, about 12x18 inches; these should have cleats nailed on them, to keep them from warping, and to keep the lower one up from the floor, so that no dampness will contract about the press.

The pressing paper should be thick and reasonably soft in texture, so as to be a good absorbent. The paper sold for putting under carpets is about as good as can be procured. Tissue paper is the best for keeping the specimens from direct contact with the drying paper. All the paper should be cut to fit the press. In placing the plants in the press, great care should be taken to arrange the parts, as to the position they are to have after mounting; the leaves should be so arranged as to show both upper and under surfaces. Where a portion of the root is to be saved, it is best to cut one side entirely off, so as to avoid unevenness in the specimen.

The amount of weight to be applied to the press should be enough to flatten the specimens without crushing. Driers should be changed twice a day and placed in the sunshine, or near a fire, so that they may be thoroughly dried before exchanging them for the damp ones in the press.

The value of a specimen depends upon the rapidity and care with which it has been dried. Therefore, the press should always be kept in a dry place. When the specimens have become thoroughly dried, they should be mounted on white paper and labeled with the name of the order, genus, species, and the common name, if it be known; any other information may be placed upon these labels, which will help to identify the specimens.

The mounting paper used should be a good article, smooth, stiff and firm; and, according to Dr. Gray's directions, should weigh about 28 pounds to the ream of 480 sheets. The size of the herbarium sheet adopted in the United States, is 11½x16½ inches. Paper may be procured from a bindery or ordered by any stationer; a good article should cost about a cent a sheet.

The specimen should be mounted about the centre of the sheet, and the label placed in the lower right hand corner. The label should be not larger than 1¾x3 inches, and they may be partly printed, if the collector so desires.

For fastening the specimen on the herbarium sheet, common white glue, dissolved in just enough acetic acid so that it may be easily applied with a brush, has been found to be the best for all ordinary plants.

As the sepcimens are mounted, the sheets may be laid away in a binder or a good clean box made of tin or wood. A good home-made binder is made by taking card-board and cutting it a trifle larger than the herbarium sheets, and making a hinge of cloth on one side, and with strings to the other side, and ends of the cover with which to tie the sheets in.

The herbarium should always be kept in a dry place, so that no mold will collect on the specimens and destroy them. Sometimes the herbarium is attacked by insects, which are very destructive, and especially is this so with honey-bearing plants. To effectually destroy these pests sprinkle the specimen with a mixture of alcohol and corrosive sublimate.

Agricultural College, Ames, Iowa, May 2, 1883.

For the American Bee Journal.

Jasper County, Mo., Convention.

In pursuance of a call heretofore issued, about 25 bee-keepers assembled at the office of Ira Creech, in Joplin, Jasper County, Mo. The meeting was called to order, and Dr. J. T. Bruten chosen chairman, Ira Creech secretary. The chairman stated the object of the meeting, after which a general discussion was entered into by Bruten, Holden, Creech, Kemmerdienner, Mrs. Gaston and others, upon the best way to handle bees, which brought out the ideas of the various bee-keepers present in regard to hives, artificial and natural swarms, and various other items connected with the apiary; after which a permanent organization was had, which was named the Jasper County Bee-Keepers' Association.

Officers elected for the first year: Dr. J. T. Bruten, President; S. B. Holden, Vice-President; Ira Creech, Secretary, and J. S. Reding, Treasurer.

Committee to draft by-laws, J. S. Bruten, John Nilson and E. Kammerdienner. The next meeting to be held in Joplin. A regular meeting is to be held on the first Thursday in each month.

It is designated that the meeting be held in different places in the district, so as to accommodate all who are interested in apiculture.

Resolutions adopted that the *Kansas Bee-Keeper*, Columbus, Kansas, and the AMERICAN BEE JOURNAL, Chicago, Ill., be furnished with a synopsis of the proceedings of this meeting. Adjourned. J. S. BRUTEN, *Pres.*

IRA CREECH, *Sec.*

For the American Bee Journal.

Cure for Foul Brood.

JOHN DUNN.

The following I have copied from the *Desert News*, from the pen of W. A. & P. M. Greggs, of Payson, Utah:

"The plan we adopt for the destruction of this fatal disease (viz.: foul brood) among bees, is as follows: When we discover a colony affected by this disease, we find the queen and cage her. We then remove the affected hive and replace it with a box painted the same color as the hive. We next brush the bees off the combs into this box, and allow them to stay there 48 hours. The caged queen is then put in the box with the bees, and is kept caged 48 hours. There should be no frames or combs put in the box during this time, but a few sticks may be put in for them to work upon. When the bees are brushed off the combs, the combs should be immediately destroyed, also the hive. While staying in the box the bees should not be confined, but allowed to fly out freely, so as to cleanse themselves outside the hive, then they will not besmear each other.

At the expiration of 48 hours the bees should be transferred to the hive, which is designed for them to occupy. This hive should be filled up with frames with foundation in them. The queen is now liberated, and the bees are now cleansed and ready to go to work like a new swarm. If a frame of brood is given them, it will be better and safer, as they will not then desert the hive. This remedy has been used for five years with success, and never known to fail. It will only apply during the honey season. If foul brood is discovered in early spring, before the honey season, or in the fall of the year, after the honey season, we know of no remedy but destroying bees, hive and all."

Since the 29th of March bees have not been out much; it has been snowing and raining most of the time, so that a few colonies have perished. I have been able to keep my bees in good condition. I have found one of my colonies queenless (hybrids), so I have given them a frame of eggs and brood, so that they can raise an Italian queen, as I was not sorry that the old hybrid queen was gone, only I did not want it to take place until I had a good queen to give the bees."

Tooele City, Utah, May 2, 1883.

For the American Bee Journal.

That "Three Ring" Fancy.

W. H. SHIRLEY.

On page 236 of the BEE JOURNAL for May 9, 1883, Mr. James Heddon, in his reply to W. Z. Hutchinson, on "Best bees; how obtained," puts me down as a "ring" fancier, but fails to give my way of "ring" or band breeding. The rings I anchored so long ago, are these: First ring, good honey gathering; second ring, good-nature; third ring, to get rid of that hybrid cross "cross" and strained mixed-up mess.

Yes; I have a fancy for the golden rings, but it must be backed up by the ring of *pure* gold, and I shall try hard to breed up my apiary of 100 colonies, so that they will be all alike, as near as possible. No two kinds of hives, or two kinds of bees for me! And the bee I am after is the one that will produce the most honey, whether black, brown or blue; three rings or no rings.

I took my first lessons of bee-keeping from Mr. T. F. Bingham, for four weeks, in 1876. That four weeks of practical knowledge has been worth many dollars to me, and to those about to take up bee-keeping as a business, I would say, go and spend a season with some practical apiarist, regardless of cost; after that, subscribe for some good bee-paper and you will then feel master of the business. As a teacher I know of none so well fitted in every respect, as my esteemed friend, James Heddon. I speak from experience. "Honor to whom honor is due."

Glenwood, Mich.

For the American Bee Journal.

The Standard Frame, Etc.

D. F. MARRS.

There seems to be a move among bee-keepers to adopt a standard frame, which I believe to be a grand idea. I have been making my hives, this spring, of the Simplicity, two-stories high; but as Mr. Heddon says some have different sized Langstroths, and by comparing his figures with my frames, I find that my frames are ¼ inch too long. This I very much regret, for I have quite a number of hives made, but I made mine by the instructions laid down in Root's A B C Book.

My bees are just "on a big tear;" I have had 8 swarms already—some of my colonies have swarmed twice; my first swarm came out April 6th; the next on the 9th or 10th. I have 16 colonies spring count, two are weak; they are all hybrids, or mixtures of various grades, from the black to a bright yellow.

I only lost one in wintering, and it starved through lack of attention. Such a thing as wintering bees in a cellar is unknown here, only by reading of it in the papers.

What swarms have issued are the largest I ever saw. I hived the last and largest one, as usual, in the lower story only of the 9-frame Simplicity Langstroth hive, and it lacked about a quart of holding all the bees after they got on the frames. Probably I should have divided it into two, giving one an extra queen; but I just set on the other story, raising the duck on top of the other frames. The bees are gathering honey from what we call the primrose, of which our prairies are white, during April and May; also from a blue blossom resembling the common sage.

This is the first year I ever knew bees to lie out in early spring; even our earliest swarms lay out for several days, but all are at work now, except some old ones in box hives which have not swarmed yet.

South Bosque, Tex., May 6, 1883.

For the American Bee Journal.

How to Read Works on Bee-Culture.

W. H. STEWART.

I have owned and handled bees, more or less, for the last 40 years, and I have read many works on bee-culture during that period. I have ever experienced a peculiar delight in seeing bees work, and in handling them; although the handling of bees 30 or 40 years ago was attended with more pain than pleasure.

I have ever found that bee-keepers were of an inquiring turn of mind. Whenever two or more of them met in conversation, some bee talk would have to be passed around, each inquiring of the other how they managed to get along with the bees and avoid mishaps and drawbacks, and, as the conversation led on, the art of bee-keeping would often be discussed in all its various ramifications (as far as then understood), and as we were about to part, I have often put a bee-book or paper in the hand of a friend, telling them, at the same time, that they would derive from it very much valuable information, if they would read it carefully.

When we met those persons again, we would inquire how they liked the books. Of course we got various answers. Some seemed much delighted, and said they had found very much valuable instruction in them. Others that seemed to view the subject at a shorter range, would say:

"I hardly know whether I like that magazine very much or not. Why, the truth is, that the more I read it, the more I got mixed, and when I had read it all through, I made up my mind that I didn't know a thing about bees, and the book didn't know half as much as I did."

Now, the truth is, that many who have made the latter answer, were men of very sound minds, but as they seemed to overlook one fact, the whole work was to them confusion. For instance, the article was, perhaps, written by an author living in Southern Ohio, who had given his experience in bee-culture in that locality, and he would recommend to others the *modus operandi* that seemed to work well in a mild climate. The reader lived, we will say, in Northern New York or Canada, and he found that bee-culture, as laid down in the book, was just the opposite of his own experience.

During all these many years, bee-culture has become wider spread, and has also taken a higher stand, and a magazine like the AMERICAN BEE JOURNAL is found to contain letters, giving the experience of the most important bee-keepers of every State in the Union. Not only so, but of Canada, England, France, Italy, Germany, Scotland, and, in fact, all parts of the civilized world.

Now, suppose an amateur bee-keeper should read, in the BEE JOURNAL, the experience and success of a bee-keeper in Texas, who used a hive that would hold about half a bushel, and had plenty of swarms in the month of March; wintered all on the summer stands, without any other protection than a simple plain box of inch boards; and extracted honey in April.

Suppose this amateur bee-man lived in Vermont or Canada, and engaged in bee-culture on the Texas plan, he would be sure to meet failures on every hand, by overlooking the fact that bee-culture in Texas is not at all like bee-culture in any Northern climate.

On the other hand, if this beginner had discriminated between bee-culture in Texas and bee-culture as practiced by Mr. Jones, of Canada, and had been governed by the experience of the latter, he might have met with success.

Let us suppose that a man should cast anchor in Northern Wisconsin, in the month of November, with his wife and five or six robust children, and propose to let the children sleep on the ground, and himself and wife in the blanket-clad wagon, through the three or four months that he wished to remain. Suppose you remonstrate with him, and tell him of his imprudence, and he should reply that he often did in that way in Louisiana, where he came from. You might post up notices that there would be half a dozen second-class funerals at that camp within four weeks, and you would be safe in doing so.

The truth is, that all warm-blooded animals require a certain amount of warmth, or they are not in a comfortable condition. If they are not comfortable, then they cannot be healthy. Animal life is shortened up just in proportion to the ill-health of the individual. As with children and our domestic animals, even so with bees; they all need different care in different localities.

Thus, all will see, that in order to get a "portion of meat in due season," it becomes necessary that we glean from our bee paper the most important items as deduced from experiences of our own locality, and as the AMERICAN BEE JOURNAL embodies the experience of the most reliable bee-keepers of the civilized world, it is very easy for all to find in it that which will do them good in their localities.

Then, scan we keen the A. B. JOURNAL,
  Met in frienly council there;
Sisters, brothers, all fraternal,
  Strength in union everywhere.

Strength in union, be our motto,
  Emblem, little honey-bee;
Outward, onward, swell the echo,
  Greeting, send it o'er the sea.

Orion, Wis.

For the American Bee Journal.

Remarks on Those Big Reports.

J. L. VAN ZANDT, M. D.

In *Gleanings* of about May 1882, B. F. Carroll, of Texas, reports a remarkable queen (a hybrid Cyprian, if I mistake not), which was proving to be wonderfully prolific, filling in all four stories, 40 frames with brood. Later, in July, he reports the "largest yield" 700 lbs. of honey. Then he is called to order, stating that Mr. Somebody had previously reported 737 lbs.; in Iowa, probably. There being an abundance of rain, Mr. C.'s bees in the fall gathered 100 lbs. more and enough to winter on—after your bees, Mr. Editor, were asleep.

A great cry is raised, "4 or 5 doubled up," "yield of colony and increase," and sundry insinuations, because forsooth Mr. C., with a climate allowing his bees to gather pollen every month in the year, and honey almost as long, should report a yield of less than 9 per cent. more than an Iowa man, whose bee year is but little more than half as long.

If it is a yield of a one-story hive, and not of the immediate progeny (workers) of one queen that is to be reported, I would suggest to Mr. C. that he have a one-story hive large enough to accommodate her Royal Highness, in order that his report will "pass muster."

The writers from whom I have quoted, are all readers of *Gleanings*, so in charity I conclude that they overlooked Mr. C.'s explanation, and also the report of over 1,000 lbs. from one queen and her increase.

This is not prompted by personal friendship, as I am not acquainted with Mr. C.

Dido, Texas.

For the American Bee Journal.

Western New York Convention.

A few of the leading bee-keepers of Western New York, held a meeting at Fredonia, April 28, 1883, and organized an Association. The day was not one calculated to make bee men boyant, being cold and raw, with occasional gusts of snow; the hills from 2 to 4 miles south of Fredonia being shrouded with a snowy mantle, which no doubt kept many from attending. The meeting was, however, a very enthusiastic one; 8 became members by paying the membership fee of 50 cents, and the following were elected officers for the ensuing year: President—U. E. Dodge, Fredonia. Vice President—T. A. C. Everets, Randolph. Secretary—T. W. Gleason, Fredonia. Treasurer — Miss Bessie Marsh.

It was then resolved that each member be requested to obtain others to unite with the Association, collect the fees and forward them to the Secretary.

The Secretary was instructed to prepare the minutes of the meeting for publication, and to be paid $1 for expenses and trouble.

T. A. C. Everets made some very interesting remarks on Queen Rearing, Wintering, etc. He was not much in favor of cellar wintering; he preferred contracting the brood chamber (according to the size of the colony) with division boards, and encasing the hives on the summer stands in an outside shell, some 4 to 6 inches longer than the hive, packing the space at the sides and on the top of the hive with dry forest leaves; he much preferred this method to cellar wintering.

E. Moon, of Moon's Station, said it was 40 years since he bought his first colony of bees, and he had more or less bees ever since, sometimes as high as 30 or 40 colonies; he has honey on his table 2 or 3 times a day, the year round, and divided liberally with the needy around him; he had never sold but 14 lbs. of honey during the 40 years he had kept bees; he had 18 good colonies last fall, but only had 3 very weak ones this spring; yet he was not discouraged; he had just bought 12 colonies, and was prepared to start anew and make bee-keeping pay; what he wanted to know was how to winter bees successfully, and advised beginners to go slow.

President Dodge spoke very favorably of cellar wintering; although he had only one year's experience in that method of wintering; if he could succeed as well every winter as he had during the past one, he could hardly ask anything better, losing only one weak colony out of 42 wintered in his cellar. He had compared closely the condition of those wintered in the cellar and those wintered on the summer stands; he thought the indications were very much in favor of cellar wintering. Speaking of hives, he said it makes but little difference what pattern we use, provided it be so constructed as to be easy of manipulation at all times, and susceptible of thorough packing and protection to the bees, with surplus arrangements both for comb and extracted honey. He would not advise bee-keepers to winter their bees all in one way; would winter some in the cellar, some on the summer stands, and, perhaps, a few colonies, each winter, in clamps. He was asked by C. E. Gates what books on bee-culture he would recommend for beginners. He replied that this was a delicate question to answer. Should he give his honest opinion, it might hit some one's corns. He had Quinby's New Bee-Keeping, Cook's Manual of the Apiary, A B C in Bee-Culture, Dzierzon's Rational Bee-Keeping, Newman's Bees and Honey, Alley's Handy Book for Bee-Keepers, etc.—all works of the highest merit. He would advise beginners to purchase one or more of these, and subscribe for some good bee paper, and start with a few colonies. He thinks the Langstroth hive, for beginners, as good as any. He feeds all colonies, short of stores, with good granulated sugar syrup; he prefers it to anything except the very best sealed honey; he feeds for winter stores during the latter part of September or early in October.

J. A. Benedict, of Brocton, had made bee-keeping pay; he wintered his bees on the summer stands; sets the hives in a compact form, and builds a tight board fence around them. He would hardly like to take the chances of wintering in his cellar; thinks it is too damp. He spoke very highly of Mr. Moon's benevolence, and would be glad if there were more of such men. He thought if there were, that the world would be much better than it is now, and the needy would fare much better.

Wm. Bauling, of Dunkirk, winters his bees in the Quinby hive, packed with oat chaff; he builds a storm house over the entrances, with lath; inserts a hollow elder or sumac into this storm house, which gives plenty of air, and acts as an ear trumpet; he could put his ear to the end of this tube, which is above the snow line, any day during the winter, and hear with ease what is going on inside of the hives. He is located in the midst of 10 or 15 acres of sweet clover, and proposes to sow more; he thinks it the best substitute for basswood, where that is scarce.

On the whole, it was very pleasant and profitable meeting; a general good feeling prevailed, and the interests of apiculture seemed to take a step in advance.

Adjourned to meet May 18, at Fredonia, in T. W. Gleason's office, at 10 a. m. All interested in bee-culture are invited.

T. A. C. EVERETS, *Sec.*
U. E. DODGE, *Pres.*

Convention for Northern Iowa.

There seems to be a number of bee-keepers in the northern counties of Iowa. Why could not a meeting be held at some central point on the C. M. & St. P. R'y.? How many vote aye?

J. G. BENNETT.
Emmetsburg, Iowa, April 27, 1883.

☞ There will be a meeting of the Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association on Tuesday, May 15, 1883, at Mr. E. Whitlesey's, two miles south of Pecatonica, Winnebago County, Ill.

J. STEWART, *Sec.*
Rock City, Stephenson County, Ill.

☞ Quite a number of the new subscribers, who have begun to take the JOURNAL this month, ask if we can supply the numbers from Jan. 1, 1883. We would say that we can supply a few more sets, and if any want them they must be sent for *soon*, or they cannot be obtained. We can supply no more numbers of 1882. They are all gone.

SELECTIONS FROM OUR LETTER BOX

How Bees Wintered in New York.

My 156 colonies of bees were wintered in the cellar, and came out in fine condition. In cellar No. 1, 155 were wintered with the loss of one nucleus; in cellar No. 2, 118, with the loss of one colony, which starved. The prospects for a good honey season were never better in this county, if the weather becomes favorable. Bees have had but little chance to fly yet; it has been so cold and windy. They are working finely, to-day, on the soft maples and willows. In the central part of this county there is only about one colony of bees now, where there were three one year ago.

IRA BARBER.
DeKalb Junction, N. Y., May 8, 1883.

The Season in California.

Through sickness last season, I lost most of my bees, after extracting 2,500 pounds of good honey. I saved only 10 pure Italian queens; I bought some blacks, and now have, with increase of 16 swarms, 39 colonies of Italians, to-day. I have to extract, this week, to keep down swarming. Young queens have been laying a week or ten days. The weather is cool at nights, and we have late spring rains. The honey crop is not very encouraging. The rain fall is light. The mountain streams have only been full once this season. Most of the time there has been but very little more water running than through the summer; that is, where the streams run the year through. Late rains have revived the flowers. Bees have made a living and a little more. It is too cool for comb honey.

J. D. ENAS.
Napa, Cal., April 23, 1883.

The Old Fogy Bee-Keeper.

I am not an expert in the art of bee-keeping, by any means, but I have a neighbor living about one-half mile from my place, who, seeing what I had done, last summer, with my bees, thinking, I suppose, to get rich, has embarked in the business. When visiting, I would tell some little experience that I had from working with my bees, and what I had learned from the BEE JOURNAL and Cook's Manual, etc.; it seems natural for bee-keepers to talk and tell all they know of the art. I tried to get him to take the BEE JOURNAL. I told him if he would take the JOURNAL I would send the order with mine and he could have the premium, Bees and Honey, in cloth. He took home some of my JOURNALS to read. Next time I saw him, I asked if he was going to take the JOURNAL? He said, No; he did not believe one word of it; he did not want it; but I see he has lost one or two colonies of bees this spring, besides lots of brood, trying to build up weak colonies. In such cold weather the brood would get chilled, before this master of the art could do what he did not believe men of 20 years experience was doing right. Of course I do not wish him bad luck; that is not my make-up; I would rather see him do well and make money, if there is money in it, but when a man tells me he does not believe what men of experience says, it makes me feel sorry for the bees that he may own. I shall not talk with him any more about bees. I like to be told what I do not know, and I do not think that I shall ever get so much experience but that some one can tell me something.

E. L. FREDENBURG.

Fentonville, Mich., May 9, 1883.

Something New to Me.

On the first day of May, I was called upon by a party three miles from my residence, to transfer 2 colonies of black bees. In transferring, I found them collecting honey, building combs in four boxes, and storing honey in the boxes; this is unusual in this vicinty. Out of 108 colonies of bees, which I put into winter quarters last fall (36 in cellar, and 72 on the summer stands), I lost one in the cellar. I think it was queenless, and, therefore, died. The rest came out very strong, with from 4 to 8 frames of brood, and a few about ready for the boxes. Of those on the summer stands, I lost four, principally by spring dwindling, three being somewhat weak, leaving me 100 colonies in fine condition. I lost eight in all. I like cellar wintering best, thus far.

DANIEL WHITMER.

South Bend, Ind., May 12, 1883.

Spring Dwindling.

The past month has been a disastrous one to our bees. I lost 6 colonies since March 9, that were then in good condition; they left hatching brood, eggs, larvæ and *new* honey. I see no cause for their dying. I have 12 colonies left, all in good condition, though some are not very strong. I put away 23 colonies. The spring has been very cold, wet and windy—bad for bees.

MRS. MYRA L. PARSONS.

Linwood, Mich., May 7, 1883.

Done Again.

I wintered 29 colonies of bees in the cellar safely, and without the loss of a single colony. They were there 141 days without a chance to fly. I gave them upward ventilation. The temperature of the cellar was from 33° to 41°. They did not breed in the cellar. Willow is now in full bloom and all is lovely. The Syrian bees take the lead. I notice that some enquire why their bees swarm out, leaving honey and brood. My advice is: Do not open the hive and handle the frames, if the colony is weak.

F. LEE.

Cokato, Minn., April 27, 1883.

Bees Gathering Honey.

Being away last fall, my bees were not properly prepared for winter. I have 24 colonies in very fine condition. They have gathered some honey. My loss was 10 colonies.

JOHN MEADER.

Delaware, Iowa, May 11, 1883.

Bereaved.

Last Friday morning a telephone message called me to Grand Rapids to the bedside of the "queen" of my household, who has been suffering for the past 15 months with that dreadful disease, cancer. She welcomed me on getting there, but passed to that other world beyond us, and into that "better life," at 7 o'clock Sunday evening. Yesterday (Wednesday) we brought her earthly remains to Muskegon, and laid them beside her father and mother, after six years of happiness.

GEO. E. HILTON.

Fremont, Mich., May 10, 1883.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., May 14, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The nominal price of extracted is 7c. for dark and 9c. for light—here. The supply is abundant and sales are slow.

BEESWAX—None in the market.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY.—The demand for extracted honey is very good, and arrivals are slow. We pay 7@10c. on arrival. We sold, since last October, more than 600 barrels, and our stock is exhausted, while our customers are relying on us for supplies. Hope our friends will supply us. No demand for comb honey, and prices nominal.

BEESWAX.—Arrivals of beeswax are good, and prices range from 30@35c. for a good article.

CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand is light and it is not now probable that all of the comb honey can be sold before a new crop comes. Prices are very irregular and generally low: 15@16c. for white, and dark unsalable. Extracted, very little trade is being done in it. 7@9c. is about the market.

BEESWAX—35@36c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—Stocks and the demand are both light. More or less difficulty would be experienced in filling a large order for a straight lot.

White comb, 14@17c.; dark to good, 11@13c.; extracted, choice to extra white, 8½@9½c.; dark and candied, 5@7½c.

BEESWAX—Wholesale, 27@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Dull; light jobbing sales only. Comb at 10@14c.—Strained and extracted at 7@7½c. Couple lots of poor Comb sold at 10c.

BEESWAX—Sold lightly at 35@36c.

W. T. ANDERSON & CO., 117 N. Main Street.

CLEVELAND.

HONEY—Stocks of honey are running low with us. 1-lb. sections are all sold and there is a very light inquiry for such; would probably sell at 18@20c. 2-lb. sections are not in demand, and no sales to quote, asking 17@18c. Extracted no sale at 9@10c.

BEESWAX—Not offering.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—Our supply is gone; we have none to quote.

CROCKER & BLAKE, 57 Chatham Street.

Price Lists.—The following Price Lists for 1883 are on our desk:

S. Valentine & Son, Hagerstown, Md.

E. A. Thomas & Co., Coleraine, Mass.

E. S. Hildemann, Ashippun, Wis.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1 year, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with $6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For four subscribers, with $8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with $10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

* * *

☞ Our stock of back numbers of this volume are now getting very low. Please look over your numbers, and if any are lacking, send us a postal card, giving the date of those you want, and we will send them, if not all gone. We give this notice, because, last year, several left it until the end of the year, and then requested us to send the missing numbers. Then it was too late, the numbers being all gone. Look them over *now*, and you may get them completed.

* * *

Foul Brood Pamphlet.—Wishing to be relieved of sending out my pamphlet on Foul Brood, I have made arrangements with Mr. T. G. Newman to supply them to the bee-keeping fraternity desiring them.

A. R. KOHNKE.
Youngstown, O., April 25, 1883.

* * *

☞ Mr. Alley's new book on Queen Rearing will hereafter cost $1.25

Cyprians Conquered.

All summer long it has been " which and tother " with me and the Cyprian colony of bees I have—but at last I am " boss." Bingham's " Conqueror Smoker " did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham.

G. M. DOOLITTLE.
Borodino, N. Y., Aug. 15, 1883.
18A4t 5B1t

☞ We have a few copies of our pamphlet entitled " *Bee Culture* " left, and have reduced the price from 40 to 25 cents each, or $2 per dozen.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

* * *

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

* * *

Special Notice.—We will, hereafter, supply the Weekly BEE JOURNAL for 1883 and Cook's Manual in cloth for $2.75, or the Monthly and Manual in cloth for $1.75. As this offer will soon be withdrawn, those who desire it should send for the book *at once*.

* * *

☞ Do not let your numbers of the BEE JOURNAL for 1882 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

* * *

☞ May we ask you, dear reader, to speak a good word for the BEE JOURNAL to neighbors who keep bees, and send on *at least one new* subscription with your own ? Our premium, " Bees and Honey," in cloth, for one *new* subscriber to the Weekly, or two for the Monthly, besides your own subscription to either edition, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

THOSE WHO WANT

Hybrid or Black Queens,

TAKE NOTICE.

We have bought a large number of **Hybrid and Black Colonies of Bees** which have fine Queens. These Queens we will sell at 50 cts. for Blacks, and 75 cts. for Hybrids. Notice our advertisement of ALBINO AND ITALIAN QUEENS, etc., in the April or May numbers.

Address, **S. VALENTINE & SON,**
20C2t HAGERSTOWN, MD.

THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published monthly, and contains the best practical information for the time being, showing what to do, and when and how to do it. **Rev. H. R. PEEL. Editor.**

We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal*, both for $3.00 a year.

1000 COLONIES of Italian and Hybrid bees for sale in Langstroth and Simplicity hives.

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17A4t 5B2t

A NEW BEE BOOK!

BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN,
Editor of the Weekly Bee Journal.
925 West Madison Street, Chicago, Ill.

It contains 160 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey Bee, and at the same time produce the most honey in its best and most attractive condition.

Appreciative Notices.

A neat and abundantly illustrated hand-book of apiculture.—American Agriculturist, N. Y.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Tenn.

Contains all the information needed to make bee-culture successful.—Eagle, Union City, Ind.

Just such a work as should be in the hands of every beginner with bees.—News, Keithsburg, Ill.

Valuable for all who are interested in the care and management of bees.—Dem., Allegan, Mich.

Engravings are fine. Gotten up in the best style, and is cheap at the price.—Farmer, Cleveland, O.

It comprises all that is necessary for successful bee-culture, save experience and good judgment. —Daily Republican, Utica, N. Y.

Written in an interesting and attractive manner, and contains valuable information for all readers, even though they be not directly interested in the care of bees.—Sentinel, Rome, N. Y.

It is a valuable and practical book, and contains a complete resume of the natural history of the little busy bee, as well as of all that one needs to know in their care and management.—Chicago Herald.

Contains a vast fund of information in regard to bee-culture. He who would keep abreast of the times must keep posted in all the improvements in his line. We advise all interested to get a copy of this book.—Daily Times, San Bernardino, Cal.

It embraces every subject that will interest the beginner. It describes all the newest discoveries in the art by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive form. It is embellished with beautiful engravings, and is the most perfect work of the kind, for the price, that has ever come under our notice.—Farmer, Lancaster, Pa.

PRICE—Bound in cloth, **75 cents**; in paper covers, **50 cents**, postpaid.

THOMAS G. NEWMAN,
925 W. Madison St., Chicago, Ill.

1883. **1883.**

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J. P. H. BROWN.
5BD15t Augusta, Georgia.

BE SURE

To send a postal card for our Illustrated Catalogue of Apiarian Supplies before purchasing elsewhere. It contains Illustrations and descriptions of everything new and valuable needed in an apiary, at the lowest prices. Italian Queens and Bees. Parties intending to purchase bees in lots of 10 Colonies or more are invited to correspond.

J. C. SAYLES,
51D15tB5t Hartford, Wis.

ELECTROTYPES

Of Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. **THOMAS G. NEWMAN,**
925 West Madison Street **Chicago, Ill.**

OLDEST BEE PAPER IN AMERICA
THE AMERICAN BEE JOURNAL
ESTABLISHED IN 1861

VOL. XIX. CHICAGO, ILL., MAY 23, 1883. No. 21.

THE AMERICAN BEE JOURNAL
Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

Adulteration, a Root of Bitterness.

One of our correspondents writes us as follows:

Prince Bismarck says that American pork and lard are the "root of all evil," and that it is fattening the grave-yards with human beings.

At East Buffalo, N. Y., are the great hog yards fed on the refuse of the grape sugar factories; there are others at Lawrence, Peoria, and Des Moines, where the hogs and cattle are covered with boils. Adulteration is the root of much evil, in America.

The California *Canner and Grocer* remarks as follows:

If some means is not soon devised to check the alarming tendency to food adulteration, there will, in a short time, be but little market for our goods abroad. It is to be regretted that manufacturers cannot be made to see that any policy, except that which grants a pure article at a fair profit, defeats itself in the end, and that an adulterated article placed upon a foreign market, bearing the label of an American firm, inflicts an irreparable injury upon American manufacturers. This should be made the gravest kind of a misdemeanor, and those driven to such courses through their inordinate greed, should meet with speedy and condign punishment. With our present manufacturing interests, we need an European market as an outlet for our goods. Increasing as our manufactures are, it is of vital importance that foreign markets should be kept open to us. That they will not be, we have every reason to expect, unless some means is soon found of checking the adulteration of goods, and the counterfeiting of brands, to enable the placing of inferior goods. The foregoing remarks are suggested by the recent action of the Cuban Government in reference to importations of American lard into the port of Havana. The Collector of Customs of that port has been instructed to refuse admittance to four brands of this American lard, until they have each been the object of a rigid scientific examination. The charge of adulteration is entered against them, and the adulterant is thought to be injurious.

The *Canner and Grocer* continues by saying, "Adulteration is the thief of trade. More tempting than Delilah, for it woos with promises of golden gains; it finds numberless lovers among those who deal in the staple-food articles of commerce, and lures them on from bad to worse, until finally they become hopelessly entangled in a net-work of dishonest practices. Under our at-present imperfect laws for protection against the sale of spurious goods, with but slight danger of detection, and with a certainty of large profit, many a dealer, finding his keener sense of honor dulled by money greed, begins to adulterate the commodities he keeps for sale, and thus enters into a career that is more villainous and more dangerous to the community than that of the old-time highwayman; for through it the public are robbed not only of their coin, but of their health as well.

"This infamous system has been growing of late with frightful rapidity until one is in almost perpetual fear lest he be eating or drinking some poisonous compound instead of the healthful article which it counterfeits. This vile traffic is confined to no locality or country, but is pursued in all the business centres of the civilized world, and from them finds its way into the most distant channels of trade. As an evidence that this evil exists in many of the ramifications of trade, let us glance at the report of the New York Board of Health, they having been investigating the matter of late: "Out of 236 samples of oils examined, the committee reported that only 32 stood the test provided by law. Seventy-five samples of drugs were examined, and 32 found to be adulterated. Samples of food to the number of 119 were examined, 60 of which were found to be in similar condition."

Organized efforts are being made in several countries to check or put a stop to this adulteration of food and other necessaries of daily use, but so far they have met with only partial success, excepting in the case of Germany, where the good work goes bravely on, and its excellent results are already proven. The English system is acknowledged to be unsatisfactory. Dr. Wigner, Public Analyst, wrote in 1881:

"These statistics, unfortunately, prove that our legislation is not perfect, but, on the contrary, that the rate of adulteration prevailing now, although a vast improvement over the condition of things prior to the passage of the acts, does not show a continued decrease."

In referring to this subject Prof. Charles R. Fletcher, of Boston, said:

"While in England 17,000 samples of food were analyzed in a year, one finds over 231,000 samples examined in Germany. The German law is rigid, and receives vigorous Government and individual support, and if anybody would examine an approach to an effective system, I think he should turn to Germany."

We are glad to learn that, in New York city, the Board of Health is putting the new adulteration law in vigorous force, and the result of its investigations has been the commencement of numerous prosecutions against dishonest manufacturers and tradesmen. There are some complaints, it is true, that these have been instigated by rival houses, etc., but even if that be so, the public have reason for congratulation. An Exchange aptly remarks that it "would be better, for instance, that the courts should punish burglars even to the verge of inquisitorial persecution, and at the same time allow sneak-thieves to go unprosecuted, than that they should, for the sake of ill-named justice, allow both of these rascally classes to go unscathed. Every case of adulteration punished is a victory gained for honest trade in general, no matter from what branch of business the offenders may have been selected."

Adulteration of honey, as well as all kinds of food, should be strongly condemned, until strong, well-defined and rigidly-enforced laws shall give full and permanent relief to all innocent purchasers and consumers.

Bee-Pastures of Mount Shasta.

The *Century* contains the following interesting descriptions of the bee-pastures of Mount Shasta, in the Sierras of the far west:

> Shasta is a fire-mountain, created by a succession of eruptions of ashes and molten lava, which, flowing over the lips of its several craters, grew outward and upward like the trunk of a knotty exogenous tree. Then followed a strange contrast. The glacial winter came on, loading the cooling mountain with ice which flowed slowly outward in every direction, radiating from the summit in the form of one vast conical glacier—a down-crawling mantle of ice upon a fountain of smoldering fire, crushing and grinding for centuries its brown, flinty lavas with incessant activity, and thus degrading and remodeling the entire mountain. When, at length, the glacial period began to draw near its close, the ice-mantle was gradually melted off around the bottom, and, in receding and breaking into its present fragmentary condition, irregular rings and heaps of moraine matter were stored upon its flanks. The glacial erosion of most of the Shasta lavas produced a detritus, composed of rough, sub-angular bowlders of moderate size and porous gravel and sand, which yields freely to the transporting power of running water. Under Nature's management, the next marked geological event made to take place in the history of Mount Shasta, was a water-flood of extraordinary magnitude, which acted with sublime energy upon this prepared glacial detritus, sorting it out and carrying down immense quantities from the higher slopes, and re-depositing it in smooth, delta-like beds around the base; and it is these flood-beds of moraine soil, thus suddenly and simultaneously laid down and joined edge to edge, that now form the main honey-zone.
>
> Thus, by forces seemingly antagonistic and destructive, has Mother Nature accomplished her beneficient designs—now a flood of fire, now a flood of ice, now a flood of water; and then an outburst of organic life, a milky-way of snowy petals and wings, gurdling the rugged mountain like a cloud, as if the vivifying sunbeams beating against its sides had broken into a foam of plant-bloom and bees.
>
> In this lovely wilderness the bees rove and revel, rejoicing in the bounty of the sun, clambering eagerly through bramble and hucklebloom, stirring the clustered bells of the manzanita, now humming aloft among polleny willows and firs, now down on the ashy ground among gilias and buttercups, and anon plunging deep into snowy banks of cherry and buckthorn. * * * The Shasta bees are perhaps better fed than any others in the sierra. Their field-work is one perfectual feast; but, however exhilarating the sunshine, or bountiful the supply of flowers, they are always dainty feeders. Humming-moths and humming-birds seldom set foot upon a flower, but poise on the wing in front of it, and reach forward as if they were sucking through straws. But bees, though as dainty as they, hug their favorite flowers with profound cordiality, and push their blunt, polleny faces against them, like babies on their mother's bosom.

Planting for Honey.

The value of an apiary is determined not by the number of the colonies it contains, but by the strength of the colonies, and their availability for work. If there is no pasturage the best bees in the world must be idle. If but little honey bloom is provided for the bees to gather from, then but little honey will be the result. Hence the necessity of providing pasturage for the bees during the whole season. "Planting for honey" is the key to the situation.

Speaking of the honey dearth between fruit bloom and white clover, when the bees hardly obtain enough honey for daily use, the *Indiana Farmer* says: "To our mind this is the most important dearth which the bee-keeper must strive to bridge over by planting. The stimulus given the bees by fruit bloom should, if possible, be kept up until the coming of white clover, so as to have them in the best possible condition when the harvest comes." This is evidently the truth in a nutshell. To obtain something to fill this gap is the one point that should engage the attention of every apiarist.

Continuous bloom means continuous honey gathering, and a continuous flow of money into the bee-keepers' pockets.

A "Good" Man Going South.—Mr. F. L. Dougherty, of Indianapolis, says: "While waiting at the depot a few days since, we happened upon friend I. R. Good, of Nappanee, Ind. Mr. Good is a queen rearer of some note, but lost heavily of bees during the past winter. Out of 225 colonies put into winter quarters only 80 survived, many of them being in a weak condition, those in the cellar suffering as much or more than those wintered on the summer stands. Mr. Good has decided to move his bees south, and after considerable search has picked on a location near Tullahoma, Tenn. He thinks he will not be able to do anything in the way of queen rearing this season, except for his own use. His brother will have charge of the Tullahoma apiary the present season. Queens will be reared here and shipped to Tullahoma for the purpose of fully stocking the apiaries there, while Mr. Good again stocks the home apiary. He is inclined to think the bee and queen trade is turning to the south, as they can there be got into better condition so much earlier in the season."

"The Doctor."—Another arrival at our Museum is "The Doctor," which is a large bellows bee smoker—the largest we ever saw—consisting of a fire box 3½ inches in diameter. Its gust of wind is tremendous, and the volume of smoke from it would instantly subdue the most vicious bees in existence. It is made by Bingham & Hetherington, Abronia, Mich,

Signs of Swarming.—Mr. F. L. Dougherty, in the Indiana *Farmer*, gives the following on this subject:

> There is no certain method of judging, from out-side appearances, as to just when a colony is going to swarm. The most general indications noticeable from the out-side of the hive that they are preparing to swarm are the inactivity of the bees, hanging in clusters about the entrances, and pollen gatherers hanging with the cluster instead of entering the hive. However, they may be prepared to swarm with queen-cells built; then, because of unfavorable weather, or a slight cessation of the honey flow may suddenly destroy the cells and give up all attempts to swarm. Or they may soon again commence preparations, wasting a very great part of the honey crop, for they seldom do but little good gathering honey while the swarming fever is on. Just here is where the knowledge of the scientific bee-keeper comes to his help. As the bees are just in the right condition to divide, he divides them at once without farther waiting. Bees will at times, if left to themselves, throw off as many as five or six swarms, each one smaller than the preceding. The old queen leaves with the first swarm. All after swarms contain young queens. Where honey is the object, colonies should not be allowed to cast but one swarm, as a very rapid increase can seldom be accomplished except at the expense of the honey crop. With the movable frame it is but little trouble to prevent this by simply opening the hive 7 or 8 days later and removing the extra queen-cells. With box hives, the only plan is to place the hive containing the first swarm, on the old stand, moving the old hive to a new location, thus depleting its strength to such an extent that it will not want to swarm any more. Before swarming, bees usually gorge themselves with honey, and while in this condition can be handled almost with impunity, yet care should always be used, that no bees be mashed or they may take the notion to make it very unpleasant for the manipulator.

The Coming Bee.—The following very amusing sketch of the troubles incident upon removing bees from cellars, is from *Gleanings*, by Eugene Secor, Forest City, Iowa. On April 17, 1883, he wrote as follows:

This subject has been discussed so many times that I should not touch it, were it not from the fact that I have seen it. I saw it yesterday. In fact, I saw several of them. They saw me, too—I mean some of them did, and the rest felt for me, and they found me. I felt them without feeling for them either. My feeling so pleased them that they called in their sisters, cousins and aunts, to feel of me also. They came, they saw, they felt. I felt, too—in fact, I feel yet.

This is how I came to see,
And feel the points of the coming bee.

They were in the cellar, where they had been for only the short period of 157 days and nights, amiable, gentle Italians, as I supposed when I tucked them in their little beds in the fall. My cellar was dark. They could not see; so I suppose they had got accustomed to feeling. May be that accounts for the fellow-feeling they manifested for me. I carried out colony No. 1, *sans* hat, *sans* coat, *sans* gloves. The "coming bee" at once dawned upon my vision. She felt of my hands, felt of neck, felt of my hair, and felt of my whiskers. She sang a song in bee-sharp which attracted all her female acquaintances. They improvised a jubilee concert on the spot. I was the only interested auditor; and as soon as I could "unload my stock," I "clapped." They appreciated the cheering, and sang louder. They called in some of their finest Italian opera-singers and performers. That music is not usually understood in this country. The clapping is generally done because it is fashionable to applaud everything that is foreign. But I understood every demi-semi-quaver. I clapped with the spirit and with the understanding also. But I felt that they were expending too much talent on such a small audience, so I retired as gracefully as the overwhelming attentions being paid me would allow.

Intermission of 15 minutes. Curtain drops.

It is usually customary for the actors to change costumes while the curtain is down. In this instance, however, the audience changed dress. The next act begins when I carry the second colony out of the cellar. This time I am prepared for the coming bee. Armed with straw hat, bee-veil, and gauntlet gloves, I looked like a cross between a knight-errant, a sister of charity, and an honest granger. With my gauntlets drawn snugly around the arms with rubber cord, and the veil ditto around the neck, now let 'em sing, sang I. They sang again; and as the wind gently pressed the tarlatan against my nose, one of the foremost of the Italian singers sat down to rest on the ornament part of my face. As I had no one to help me let go of the hive I was carrying, and as I was in somewhat of a hurry, I allowed the Italian miss to keep her seat. All at once she doubled up like a boy who has eaten too many green cucumbers; and as if afraid of falling off, she drilled my proboscis with her little gimlet. Others of her companions, hearing of her distress, came to see what was the matter, and sat down also. And as there was not sitting room on my front porch for all the sympathizing friends, some of them crowded between my veil and the place where my shirt collar ought to have been, and came up on the inside for a closer interview. By the time I had reached the yard, my neck felt as if I had undergone treatment for sore throat with counter-irritants. Then if you ever saw a cat trying to pull a mitten off its head with its fore paws, you can imagine how dignified I looked. Instead of being the audience, I was now one of the chief performers, while my wife, sitting in the bay-window, was the interested and amused spectator, enjoying the show as much as our boys did Barnum's Hippodrome. I created as much interest as a whole menagerie, when the animals had just been "stirred up." The performance lasted only about an hour, and closed amid the wildest enthusiasm.

Don't talk to me about the *Apis dorsata*. If their *gimlets* are any longer than the ones I felt, I'll be excused from buying any. Tell Mr. Jones he had better call Frank Benton home. I have lost all interest in the "coming bee."

Dzierzon's Rational Bee-Keeping.

Gleanings, in bee-culture, gives this book the following notice:

Mr. Newman has kindly sent us a work entitled "Rational Bee-keping," by our old father Dzierzon, the originator of the theory bearing his name. The author is not only a thoroughly scientific bee-keeper, but a naturalist. He has probably made greater strides in scientific apiculture than any one man. His book contains his many discoveries, together with his valuable experience and research. In addition to this are foot-notes by C. N. Abbott, the former editor of the British *Bee Journal*. We thus have the opportunity of direct comparison and verification. As regards the nature, the distinctive characteristics and explanation of some of the peculiar phenomena noticed in bees, the book seems to stand among the foremost, if not in the front ranks. I hardly think the implements of the apiary would be at all suited to American bee-keepers; but as for real scientific value, it would well repay any bee-keeper whose attention is at all inclined to scientific research, to purchase a copy. It contains 350 pages, fully illustrated.

We can mail it to any address for $2, bound in cloth, or $1.75 in paper covers.

☞ Articles for publication must be written on a separate piece of paper from items of business.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., May 21, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The nominal price of extracted is 7c. for dark and 9c. for light—here. The supply is abundant and sales are slow.

BEESWAX—None in the market.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY.—The demand for extracted honey is very good, and arrivals are slow. We pay 7@10c. on arrival. We sold, since last October, more than 600 barrels, and our stock is exhausted, while our customers are relying on us for supplies. Hope our friends will supply us. No demand for comb honey, and prices nominal.

BEESWAX.—Arrivals of beeswax are good, and prices range from 30@35c. for a good article.

CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand is light and it is not now probable that all of the comb honey can be sold before a new crop comes. Prices are very irregular and generally low: 15@16c. for white, and dark unsalable. Extracted, very little trade is being done in it. 7@9c. is about the market.

BEESWAX—35@36c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—Stocks and the demand are both light. More or less difficulty would be experienced in filling a large order for a straight lot.

White comb, 14@17c.; dark to good, 11@13c.; extracted, choice to extra white, 8½@9½c.; dark and candied, 5@7½c.

BEESWAX—Wholesale, 27@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Dull; light jobbing sales only. Comb at 10@14c.—Strained and extracted at 7@7½c. Couple lots of poor Comb sold at 10c.

BEESWAX—Sold lightly at 35@36c.

W. T. ANDERSON & CO., 117 N. Main Street.

CLEVELAND.

HONEY—Stocks of honey are running low with us. 1-lb. sections are all sold and there is a very light inquiry for such; would probably sell at 18@20c. 2-lb. sections are not in demand, and no sales to quote, asking 17@18c. Extracted no sale at 9@10c.

BEESWAX—Not offering.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—Our supply is gone; we have none to quote.

CROCKER & BLAKE, 57 Chatham Street.

☞ The Southwestern Iowa Bee-Keepers' Association will hold its annual meeting at the apiary of L. E. Mercer, Lenox, Taylor county, Iowa, May 26, 1883. Meeting called at 10 o'clock sharp. Forenoon: Election of officers. Afternoon: Work in the apiary, when any question, with regard to handling bees, will be practically explained. Accommodations will be provided for visitors from a distance.

W. J. OLIVER, *Sec.*

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

CORRESPONDENCE

For the American Bee Journal.

Bees and Honey in Navarro co., Texas.

B. F. CARROLL.

The following Table represents the bee and honey interest in Navarro County, Texas, with the exception of those who have only one or two colonies of bees :

NAME OF APIARIST.	No. of Colonies in Spring.	No. of Colonies in the Fall.	Pounds of Honey Comb.	Pounds of Honey Extracted.	Kind of Bees.
H. A. Halbert......	5	20	275	....	Italians
J. R. Love..........	16	38	500	....	Blacks
M. M. Morrison....	20	45	250	1000	Hybrids
G. A. Treadwell....	2	5	125	....	Blacks
Mr. – Voss	50	75	500	1250	Italians
John S. Miller......	14	28	375	....	Blacks
B. F. Carroll	36	90	250	6150	Cyp. Syr. Ital.
Dr. C. H. Hart.....	22	55	200	2000	Italians
W. R Melton	19	72	300	1460	Blks.Hyb.Ital.
M. T. French......	14	35	350	480	Bl.Cy.Hy.Ital.
Tank Spivey.......	1	2	....	125	Hybrids
Dr. W. S. Robinson	9	18	750	....	Blacks
Dr. Farley..........	9	25	250	850	Ital. & Blacks
G. W. Thomison...	3	11	....	624	Italians
Westbr'k & M'Afee	75	110	3750	....	Blacks & Cyp.
Mrs. Eliz. Melton..	19	25	150	250	Blacks
Jas. Davis..........	2	2	60	....	Blacks
J. C. King	4	4	....	120	Blacks
Jack Smith.........	2	4	250	....	Blacks
Ben Younger	3	7	285	....	Blacks
Dr. H. B. Ransom..	25	36	....	2016	Hybrids
R. Gowen	4	10	....	360	Hybrids
A. T. Barton.......	15	30	750	....	Blacks
Henry Forgey	7	22	....	600	Blacks
George Acre.......	8	25	485	....	Blacks
T. B. Rice	4	12	370	....	Blacks
G. W. Cook.........	5	16	420	....	Blacks
J. R. Herring......	4	12	600	....	Blacks
W. T. Moore	2	6	300	....	Blacks
Bill Black	9	26	750	....	Blacks
W. H. Woodard....	23	26	625	....	Blacks
J. T. Lancaster	15	35	1000	....	Blacks
A. S. Gill	1	3	150	. ..	Blacks
J. M. Trammel	3	8	320	....	Blacks
Wm. Boykin........	5	25	625	....	Blacks
A. J. Miller.........	2	2	80	....	Blacks
James A. Spicer...	5	18	500	...	Blacks
Thos. Stokes.......	5	9	270	....	Blacks
Wm. Stokes........	1	3	135	....	Blacks

Dresden, Texas.

For the American Bee Journal.

Uniting Bees—Spring Management.

G. M. DOOLITTLE.

I am requested by several to give, in the BEE JOURNAL, my plan of uniting bees, and I will try to do so; if I do not make it all plain, I will further explain if necessary.

We are often told, that if our bees are weak in March or April, we should unite them at once, putting two or more together, till a fair colony is formed. I formerly adopted this plan until I ascertained from many experiments, that colonies thus made were no better at the end of three or four weeks, than each would have been had they been left separated. If I had colonies that would not live till June separately, I found they would not if united. I have put as high as six or seven very weak colonies together, in April, thus making a good large colony at the time, and in a month all were dead. Hence, I came to the conclusion that I could not unite my bees profitably early in the season, so I have adopted the following, which has proven very successful:

About the middle of April, according to the season (earlier if any early season, and late if a late one), some cold morning I look over all my bees, by taking off the cap and lifting the quilt a little, and all that do not occupy five spaces between the combs are marked, and the first warm day I shut them on to as many combs as have brood, by means of a divison-board. Those which are very small, so as to have brood in only one or two combs, and small patches at that, have all their extra combs taken away from them, so as to take precaution against robbing; but if stronger, I leave the extra combs on the other side of the division-board, so that the bees can carry the honey over as they need it for brood-rearing.

The entrance to each hive is contracted to suit the size of the colony, not leaving more than an inch in length for the best of them, and only space enough for one bee to pass at a time for the weakest.

The next work is to increase the brood as fast as possible in these small colonies. I keep them on the combs, first given them, till they are filled with brood clear to the bottom, when I give them an empty comb, placed in the centre. This will be filled in a week or so, when another is given. I go over them once a week, in this way, till I have five frames full of brood in the strongest. The next time I go over them, I take a frame of brood just hatching from those having the five filled, and give it to the next strongest (say one that has four frames), putting an empty comb in the place where it came from, and so keep working until each hive contains five frames crowded with brood.

Do not make the mistake of giving the frame of hatching brood to the weakest colonies first, for they may not be strong enough, if the weather should suddenly become cool, to care for it; when a loss of brood, to the amount given, might occur.

By the middle of June, I generally get all in the above condition, when they are ready for uniting. To do this, I go to No. 1 and open it; look the frames over until I find the queen, when I set the frame she is on outside of the hive; then take the four remaining frames (bees and all) to No. 2, spread the five frames apart in No. 2, and put the four frames taken from No. 1 in each alternate space, made by spreading the frames in No. 2. I now close up No. 2, and in 12 or 15 days it will be one of the strongest colonies in the yard.

By alternating the frames, the bees are so mixed up that they will not quarrel, and I have never known a queen to be harmed. It will be seen that I use but nine frames to the hive, but the plan is the same with any number of frames. I now return to No. 1, where the frame of bees was left standing outside of the hive, close to one side, and put in an empty frame ; adjust the division-board, and I have a nice nucleus to get a queen from at any time I may need one. I find also, that such a nucleus will build comb almost as cheaply as foundation can be gotten into comb ; for many of the old bees taken to No. 2 will return, thus making a strong nucleus, which will build nice straight worker combs, as if by magic. If I do not wish these for queens or comb building, I build them up to good strong colonies by the fall.

UNITING IN THE FALL.

If I wish to unite bees in the fall, on account of there being but little honey, fewness of bees, or from whatever cause, the first thing to find out is, which of the two has the most valuable queen. Having ascertained this, I hunt up the poorest and kill her, then take this hive to the stand of the one it is to be united with. I now select from the two frames having the most honey in them, to the number I wish to winter them on, and set them in one of the hives, alternating them, as they are set in the hive. I next shake the bees, which are on the remaining frames, off at the entrance, taking one frame from one colony, and the next from the other, so as to mix the bees up as much as possible.

When all the bees are inside the hive, the work is done. Remove the hive, bottom board and all, from the stand occupied by the united colony, and no loss of bees will occur. What few bees go back to the old stand, return after finding their old hive is gone; also the mixing up process causes them to mark their location anew, at their first flight afterward.

Borodino, N. Y.

For the American Bee Journal.

Bees as Aids to Fruit Growers.

J. F. LATHAM.

In the agricultural column of a weekly paper, I find a "clip" credited to another journal, from which the following is an extract:

"Honey is a vegetable production, appearing in greater or less quantities in every flower that nods to the breeze, or kisses the bright sunlight.

* * * It is secreted in the flower for the purpose of attracting insects, thus securing the complete fertilization of the female blossoms.'

The declaration embodied in the last sentence of the foregoing extract, is new to me; as, heretofore, I have understood the nectar of flowers to be a menstruum, surplus secretion, excess of growth, etc., drawn from the soil and atmosphere, which, after the necessary operations of assimilation, and contribution to the requirements of vegetable growth are accomplished, is conveyed to and lodged in the chalice of the pistillated bloom by capillary process, and can, therefore, be no more or less than waste matter, so far as needed to further enhance the growth of fruit or seed.

That the nectar in flowers is an aid to their fertilization (in a general way), by inducing insects to distribute the fecundating element from the staminate blossoms, by conveying it on their bodies during their flights among the flowers, while collecting the exuding sweets, is evident; that this is the sole object for which nectar is secreted does not seem admissible.

Pollen is borne from flower to flower on the breeze as well as on the bodies of insects; in fact, that appears to be nature's prime method of conveying the fertilizing germs from the anthers of the staminate to the pointals of the pistillate blossoms. Among insects, it seems the honey-bee, in her floral wanderings in search of nectar and pollen, in consequence of her peculiar form and downy covering, should be entitled to a first place in the work of direct and cross-fertilization of fruit-producing flowers of all kinds; and were it not for this generous and disinterested aid to the chances of nature, the loss to fruit growers would be much greater every year from sterile bloom.

That the honey-bee causes injury by extracting the nectar from fruit-producing trees and shrubs, is simply fallacious, notwithstanding the generally entertained and oft-expressed opinion of those ignorant of dame nature's process of reproduction, to the contrary. During the past two following seasons I have observed apple trees loaded with well developed matured fruit in autumn, that bloomed several days earlier than the remainder of the orchard, and were swarming with bees until the bloom from the other trees shared their attention. Two of the trees alluded to, stand but a few feet from some of my hives, and have always been favorites with the bees during the season of bloom, but I have yet to note any diminution in their products caused by the bees sipping nectar from their blossoms.

The discussion of this subject, of "planting for honey," is receiving a merited attention from contributors to the BEE JOURNAL, but it appears to be too desultory to produce the benefit it might, if in a more concise form. Would not a more favorable influence be exercised by having a space in the bee publications in which those who have tested the qualities of honey-producing trees, shrubs and plants of various kinds, can be allowed to give their experience in detail. The names of trees, etc., and their adaptability to location in all sections of our land, from Maine to California, is needed. As the pursuit of the apiarist is constantly prompting his attention to the sources from which honey is obtained by his bees, who is more favorably situated to observe and reduce the results of his observations to utility?

Again, if properly appreciated, a triple benefit may be derived from the result of such a consolidation of effort; a more general cultivation of food-producing trees, shrubs and plants, a more bountiful return for apiarian enterprise, and the unequaled advantages of studying the illustrations of nature from her open book of floral beauty; for

> "There are sermons in stones,
> Music in the trees,
> Books in running brooks,
> And good in everything."

For the American Bee Journal.

Sundry Matters from Canada.

ALLEN PRINGLE.

I find, no matter how much one may know about the science of bee-keeping, or even of the art, through experience, the BEE JOURNAL is a great *desideratum*—a real aid to be desired and valued. The varied experience of different bee-keepers contributed to its columns, is interesting and valuable, no less to the professional than the amateur apiarist.

With one thing, however, I feel disposed to find a little fault, or rather kindly admonish those concerned, and in doing so, I hope to give no offence, as the admonition is given in no carping or captious spirit, but solely for our common good as bee-keepers. Some of the reports sent in seem, at least, *prima facie*, to be overdrawn or exaggerated. This, however, may be entirely unintentionally on the part of those who send such reports; nevertheless they are misleading, and tend to lead to evil consequences in more than one way.

When a correspondent says he has taken so many hundred pounds of honey—an almost fabulous amount—from a single colony of bees in the one season, he may be quite honest in his statement; but his statement may, at the same time, need much qualification or, at least, explanation, and this ought always to be given. A hive of bees may be large—much above the average—and it may have one story, on top of another, and it may be kept the whole season gathering honey instead of allowing it to swarm or dividing it; and under such circumstances, such a colony would, no doubt, during a good season, carry in an immense quantity of honey, compartively speaking. But it would be either disingenuous to say that one colony of bees did all this, without giving any explanations.

By a colony of bees, the reader understands an average colony, under ordinary circumstances or conditions. Now, please bear in mind, I do wish to impeach the honesty or sincerity of a single correspondent.

So far as my experience and observation have gone, bee men, as a class, are proverbially honest and fair-minded men; and let us not, therefore, tarnish our fair name by making statements or reports which have even the semblance of fraud or misrepresentation. Let us avoid even the appearance of evil. Let us under-state, rather than over-state our exploits in our reports.

The amateur apiarist, starting out in the business with great and commendable enthusiasm, and, perhaps, superadded to that, great expectations of coining money, is only too apt, when he comes with honest pride to write his report, to draw upon the uttermost fraction for presentation. The temptation is strong to draw it at the highest instead of the lowest. But, gentlemen (and ladies too, for we have lady bee-keepers), let us be strictly, severely, honest and fair in our reports, and in our statements of facts in our experience.

Sometimes incidents of apiarian experience are given, which seem to be in direct opposition to well-established principles or hypothesis, which have been well-nigh postulated into laws or principles.

I was present, last fall, in Toronto, at the meeting of the Ontario Bee-Keepers' Association the first night, and one gentleman stated on that occasion that one of his neighbors had buried the bees from a hive he had taken up in the fall in a hole in the earth, and duly filled it in, and in the spring, upon exhuming them, they were found to be alive and well—in good health. The gentleman improved upon this fact (?) by suggesting that the plan of wintering bees in a "dormant" condition, without any food, was well worth considering. This sage bee philosophy no one attempted to controvert; albeit Mr. D. A. Jones, our great Canadian bee-king, dryly remarked that he would not mind paying $500 for a queen that would produce such unique progeny.

Experience, to be valuable, must be real. There must be no mistake about the facts. Then if they are facts, and are in conflict with certain preconceived theories, so much the worse for the theories. A few real, stubborn facts will sometimes spoil a very nice, plausible and time-honored theory. But before we discard the cherished theory, let us be sure that the opposing statements are facts.

It is, therefore, of the utmost importance, if the contributed experience of bee-keepers through the BEE JOURNAL, is to be really valuable in helping us forward to ultimate truth, that such experience should be most carefully and accurately stated, and nothing put forward as a fact if there is any uncertainty or doubt about it, especially if such alleged fact militate against a recognized principle.

Of course I am well aware that very unusual and even unheard of facts will sometimes arise in our experience, and this, on the other hand, should make us careful about putting anything down as an ultimate principle until it is well supported. The most unexpected things will sometimes turn up in the experience of the practical bee-keeper.

As relevant here, allow me to relate a little incident in my own experience: Last summer, in clipping the wings of a young, recently fertilized Italian queen, in a new colony, I accidently cut off one of the legs of her royal highness. This was ungallant, but there was no *malice prepense*, as the lawyers say. Not knowing exactly what the upshot of this surgical misadventure might be, I kept an eye upon her majesty for a few days. I found, however, that she laid all right, only seeming to experience a little difficulty in locomotion, being a trifle awkward in her movements. She was very prolific, and things went on swimingly in her establishment, although the head thereof was minus a leg and without wings. In a short time they began to prepare for swarming, by starting numerous queen-cells, all of which I destroyed, or supposed I did; I examined them again in a week or ten days, but found no new cells, and was not aware that in a sly corner was one just about hatching, of the original ones which had escaped my notice. It so happened that I did not look into this hive again for two weeks or more, when, there I found a young, fertile laying queen, wings, legs and all. I looked around, and upon another frame found No. 1 minus foot and wings. There they were, both in the hive, and no mistake. I was a little puzzled; looked around and found the place where the cell had been, which had escaped me, when I was destroying the others. At first thought, I had supposed No. 2 had been but recently hatched, and that the two royal rivals had not yet met. But, no; the young queen was evidently fertile and laying, as I afterwards proved. To test matters, however, and look further into the problem, I closed the hive until the next day, when I examined it again. I still found both queens there on different frames. No. 1, with wings and leg off, seemed, however, to be neglected, and I noticed a slight diminution in the size of her abdomen.

My theory, whether right or wrong, was this: The workers, being cognizant of her deformity, were superseding her. They were nourishing the young and perfect queen, and neglecting the deformed one, and, hence, she had ceased laying. But this ungracious business did not happen to agree with my notions of entomological ethics, and I accordingly put a stop to it. Besides, barring the deformity of No. 1, she was a fine, handsome queen, and very prolific. I accordingly took out No. 2, clipped her wings, and put her in another place where she was needed, and left No. 1 to "hold the fort." The usurper being gone, and the bees finding that fact out, turned their attention to their rightful mother, and nourished her as she deserved. All went well, and she is now safely away with her colony in winter quarters, as also the other. Now, whatever may have been the experience of others in this direction, the fact of two fertile queens occupying the same hive together for some days, was, to me, something altogether unprecedented.

The winter here (Eastern Ontario) has, so far, been unusually severe, the temperature, frequently dipping much below zero, and we have had continuous sleighing nearly three months. As a consequence, some of the old-fashioned bee-keepers, in this section, who leave their bees out during all the winter on the summer stands, without any protection, will, I fear, as Mr. Jones says, be in "mourning" in the spring. Of course we have some few bee-keepers here in the East who try to keep up with the times and do the business scientifically; but there is, I believe, a larger proportion of such in Western Ontario, where Mr. D. A. Jones is located, and where his influence in developing apiculture has been much felt, in the past two or three years. Of course every Canadian bee-keeper is proud of Mr. Jones, whom I had the pleasure of meeting for the first time in Toronto, last fall, at the Industrial Exhibition, where he had a splendid display of almost everything pertaining to the art of apiculture. I was very favorably impressed with the genuinely progressive and cosmopolitan spirit of Mr. Jones, who, though having made many inventions and improvements in apiarian apparatus, patents nothing, but leaves all free to make from his patterns. This admirable trait is as rare as it is generous. Without, evidently, having had many scholastic advantages, Mr. Jones has, by his native ability, genius and industry, placed himself in the very first rank of eminent apiarists, and has shown more enterprise in the business than any of his compeers.

In the eastern part of the Province here, we have recently lost one of our best and most enthusiastic bee-keepers. I refer to Hon. Lewis Wallbridge, of Belleville, who has lately been elevated to the chief justiceship of the new Province of Manitoba. Mr. Wallbridge was president, last year, of the Ontario Bee-Keepers' Association, and was a very enthusiastic amateur bee-keeper. I fear, however, that he will not be able to enjoy his favorite recreation in the Northwest, as the climate, I understand, is too severe for what he used to call his "little pets," the bees. If these "little pets" failed to let him feel their stings once in a while, he said he felt "neglected." Most people would prefer to suffer that kind of neglect, but not so with the redoubtable Lewis. In the East here we have another very good bee-keeper, Mr. Wm. C. Wells, of Thurlow, Hastings County. Mr. W. is quite a genus in his way, he makes nearly everything he wants in the bee line for himself, even to making foundation comb.

Lennox Co., Ont.

For the American Bee Journal.

Extracted Honey and Extracting.

FAYETTE LEE.

In my last article I described my plan for getting bees ready for the honey harvest, and that comes about July 6. Last year basswood bloomed on July 19. The bees need all the honey from dandelions to rear their brood. You may see the comb begin to look white, and in a few days it will be all capped over; but let it stand in the hive until June 25, then get the honey extractor ready and a sweet barrel, well waxed, to put the first honey in; this done, you need a good smoker, screw driver, and a turkey wing. Take the comb basket and stool to put the upper story on, and commence at hive No. 1, put the screw-driver between two frames and pry them apart, smoking the bees at the same time; put the upper story on the stool, take out four of the outside frames, put them in the comb basket, and fill up the brood-nest with frames of foundation. Put back the upper story and take out every frame and extract them and return them to the hive. Now, we have four spare frames. Go to No. 2 and take off the top story, as before, take out four frames and put in the extra four, and put on the upper one again and extract the same as No. 1. We take out all the dark honey, so that it will not get mixed with the basswood honey. Do not stop to strain the honey. Put it in a 40 gallon barrel and let it stand a few days, when all the small cappings will be on the top. Then skim it and cover it with sheeting. By all means keep each kind of honey by itself.

My honey weighs 11½ pounds to the gallon. It is a disgrace to a bee-keeper to have honey sour. The cause of its souring, is that it was extracted before it was ripe. When it is capped, it is ripe, and the bees put their seal on it. If you want to spoil the sale of extracted honey, sell your store keepers unripe honey, and you will do it the first time. It is not the big yield we want, but good honey. We keep this first honey till September to feed, if we need it. My honey in June is dark in color, sometimes. Goldenrod does not give much honey, and we want this to feed the bees.

Having taken all the dark honey out on June 25, the next yield will be from the basswood. Wait about four days from the time the first basswood honey comes in, then open all of the top stories, and put the outside frames in towards the centre, and close up the hives. In this way I get all the frames full about the same time, so that I can extract it all at once. In about four days more, the bees will have it capped over. Now we are ready to take the first basswood honey. We will commence at No. 1, and extract four frames from the brood-nest, and all from the upper story. Be sure to take the outside frames in the brood-nest. I only extract two times during the basswood harvest. Now being through extracting for a while, put the honey in tin cans and glass jars for market, and label it "PURE HONEY," giving your name on every can and jar, that you have. I believe every bee-keeper has a right to set a price on his honey; if every one would do so, it would be much better for them.

I have been in the bee business for six years, and have sold 6,757 pounds of honey, and put my own price on it, and it averaged 11 cents a pound.

In producing extracted honey we have surplus combs to use from the last year, and bees will store honey when they will not make comb. One year I tried tiering up, with a few hives, and did not extract until the honey harvest was over. I found that the bees had not capped the honey, for they had too much surface room to cover, through August and September.

Do not extract from the brood-nest, but take all they put in the upper story. There may be better ways to manage bees to produce comb honey, but the way I have managed has given me 92 pounds of extracted honey to the colony, spring count. If beginners will follow my way of swarming, they are sure to have strong colonies, and that is the sure way of getting a large crop of honey. Do your best, and the bees will do the rest, if there is any honey to gather.

Cokato, Minn.

* * *

For the American Bee Journal.

The Use of Separators.

T. E. TURNER.

I confess to becoming "so insane" as not to use separators, and will not charge those who continue their use with insanity; but will confess that my experience has made me so sane as to discontinue their use. My experience with them has been varied. I have used narrow strips of tin for separators, and also broad pieces, and find that bees work best with narrow strip separators, if any are used; but they will build some combs fast to the tin. With broad pieces and large passages for bees to enter the sections, combs are built under, out of shape for casing, and with broad pieces and narrow passages, bees are slow to commence work in the sections. Some may force them into sections with such separators by keeping them in prime condition, but with all the forcing I can do, they are slow to enter sections with narrow spaced separators.

That separators lessen the crop of surplus is not a delusion, as is proven by the experience of many leading apiarists. To test this matter, last season, I put a frame of sections in each end of a hive, one with and the other without separators, and the bees worked in the one without separators, and would not touch the other; then they were changed in the hive, and new sections put in with the same result. Then sections were put in both ends of the hive without separators, and they worked in both places nearly alike. Now this result, with the fact that bees will, things being equal, work more readily in the space occupied by 8 or 9 sections than that occupied by one section, proves that as much honey cannot be obtained with as without separators.

Now, with the right kind of a rack to hold sections, and a little care in putting starters in, I claim that one can manipulate more colonies of bees for comb honey, without separators, than he can with them, and produce his honey in just as good shape for market. The reason for this is, that he will have to give less time and care while the sections are on the hive, to see that they get sealed, and taking them off, and no more in casing them for market.

The finest section honey in Chicago, at the time of the meeting of the Northwestern Convention, and, perhaps, during the past season, was produced by a bee-keeper in this county, without separators. Seven thousand pounds were produced from 60 colonies, spring count, in that way. Twenty thousand pounds of first-class honey was produced in this part of Wisconsin, last season, without separators, and packed and shipped to various points with no complaint of leakage from combs rubbing each other.

Mr. Steer's narrow frame and separators, described on page 189 of the BEE JOURNAL, for April 11, though he uses a divison-board, will not admit of the speedy removal of the full sections from the hive, and the bees will propolize his section frame to the hive, if it is the same size as the inside of the hive.

Glassing sections is too expensive both to producer and consumer; for the time and cost of glassing is much greater to the producer than he gets returns for, and the glass is useless to the consumer.

So separators are dispensible, and bee-keepers are dispensing with them, and also with broad frames, and are adopting suitable racks in their stead. Progressive apiarists here would not think of securing a large crop of comb honey in marketable shape with their use now.

You will see from these remarks that the articles on separators, tin or wood, that have appeared recently in the BEE JOURNAL, are of but little interest to some of its readers, for they regard them as useless and cumbersome.

Sussex, Wis.

* * *

Western Michigan Convention.

The Western Michigan Bee-Keepers' Association held their regular semi-annual meeting at Grand Rapids, Mich., May 3. There were about 20 members in attendance.

The meeting was called to order at 10 a. m., by the president, W. H. Walker, of Berlin. Secretary Franklin S. Covey, of Coopersville, read the minutes of the last meeting, and they were approved by the association. The treasurer's report was also read, which showed the society to be in a good financial condition. All expenses had been paid, and a surplus of a few dollars still remained in the treasury.

The forenoon was chiefly occupied with dissusions on wintering bees. T. M. Cobb, of Grand Rapids, introduced the subject with a few remarks.

Quite a number spoke concerning the matter, and the general sentiment of the convention seemed to be that a good cellar was preferable to any method of out-door shelter.

A. B. Cheney, of Sparta Centre, had wintered his bees in a cellar for ten years past, with uniform success.

President Walker thought that they should be so protected, if left out during the winter, that they would not be compelled to rely upon the rays of the sun for their warmth—that heating apparatus was too variable.

Secretary Covey thought that too much pollen was detrimental to a healthy condition in bees. Honey taken by the bees passes off in insensible persiration, having no ash in the bowels of the subjects, and they need not fly to void their fæces. Pollen is stronger food, and excites breeding in the winter time, when such an act is out of season, thus causing disease and otherwise disarranging the system of the hive.

A. A. Dodge, of Coopersville, presented the next topic for discussion—the subject of foul brood. He had met with good success in using the Jones method of cure. He shakes the bees of their combs into a box which has been provided with thorough ventilation, and places it in a cool, dark place. The bees remain in their comparative dungeon for two or three days, in a state of absolute fasting. They are then removed to a new hive. He starves the bees until the infected honey of the sacs is all consumed. The use of automizers and salicylic acid had proved unsuccessful in meeting the desired end.

T. M. Cobb made a few remarks upon the different varieties of bees. He expressed a preference for the Cyprians. They were more hardy and better honey gatherers. They would breed faster, and raise more and better queen cells; also, they were less liable to swarm.

The meeting, upon the whole, abounded in features of interest. Although the attendance was not as large as the merits of the discussions deserved, yet those who visited the scene displayed the greatest zeal in their work of investigation, and retired at the adjournment of the meeting fully satisfied with the manner in which they had spent the day.

The fall session of the association will be held at Berlin, on the last Wednesday in October.—*Grand Rapids Times.*

* * *

For the American Bee Journal.

Essentials of a Standard Frame.

E. B. SOUTHWICK.

I notice that every little while there comes up the subject of the "standard frame," and an article giving the writers preference, but seldom the inherent properties, for which the preference is given.

It is also frequently asked, "What is the best frame?" And the answer given is, "We use the ——— frame," without giving the merits that frame it above all other frames. The two classes of frames that their advocates have been trying to have recognized as the standard frame, are, I believe, the long and shallow frame like the Langstroth, and the nearly square ones like the Gallup.

Now, I request that some one, fully competent and versed in all the wisdom and lore of the Langstroth frame, and its every property and merit, will write an article and mention every good feature it has, not leaving out a single quality that recommends it to be "the standard frame," and I will write an article comparing its merits with that of the square frame, and have both articles printed side by side in the same JOURNAL, and copied into other papers, if their editors can be induced to do so. Then when the kind of hive or frame is asked for, the inquirer can be referred to these articles for the reasons for either.

The advocates of the square frame may think their side is poorly represented, but do not mention that, lest the other side make that an excuse, and keep mum. If my proposition is agreed to, I will write out my article as soon as I know it, and know who the other advocate is to be.

Mendon, Mich., May 10, 1883.

For the American Bee Journal.

The Great Need of a Bee Boom.

JOS. M. HAMBAUGH.

This section is sadly in need of a bee boom. Old fogyism reigns supreme, and notwithstanding the surroundings, will warrant the belief of this being a superior point for harvesting the nectar, but few of my neighbors use a movable frame hive, preferring to indulge in the old-fashioned box, constructed of rough planks, with round sticks through the centre, and, perhaps, slats at the top and bottom. This seems, in their estimation, a broad stride over the old-fashioned mode of hollow bee logs, sawed up in about 3 feet blocks, with a roof over one end; not appearing to see the gist of the new-fangled idea of the movable frames; and though they keep abreast of the times in other matters, the poor little honey-bee is left to battle with the ignorance of the past.

The common German black bee is the only kind within 20 miles of this section, if I mistake not; and yet honey (though of an inferior quality) has always been abundant.

To the east and southeast of my residence is spread a vast waste of low lands, four miles in width, reaching to the Illinois river, which is subject to overflow. This region is studded with willow, button-brush, boneset, pond-lily, Spanish needle, and myriads of other blossoms, not known to the uncultured. To the north and west are the bluffs, whose fertile hills, where not disturbed with the woodman's axe, is heavily wood, with linden or basswood predominating. How many colonies can I have without exhausting the pasturage? I have 17 colonies with which to make a start; all natives, and I intend to Italianize as soon as all are in movable frame hives. I have 27 Langstroth hives completed for the purpose, and I wish to ask if the perforated zinc, for excluding drones and the queen from the upper story, is a success? If not, what divice is used, if any?

The writer has had the pleasure of visiting Charles Dadant & Son, of Hamilton, Ill., and though we came as a stranger, we were treated as a brother. A glimpse among their bees and foundation manufactory was worth many times the expense of my trip, and opened my eyes to the onward march of scientific bee-culture. Long may they live as shining lights in scientific bee-culture.

Versailles, Ill., May 14, 1883.

[Your pasturage resources are good, but you will find the 17 quite enough to begin with. As they increase, so will your knowledge of the business increase, by the practical knowledge you will obtain in managing them. The zinc excludes are used by many, and are considered indispensable by them.—ED.]

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Sundry Questions.

1. How long should the brood-comb remain in the hive before changing for new; as some claim that the cells gradually become less by frequent breeding in them?

2. How old ought a queen to be before she should be replaced with a young one?

3. Does the old queen leave the old hive with the first swarm in the spring?

4. Why do bees lie out on the sides of the hives, so long in spring, before they swarm; are they waiting for a queen to hatch, or is their old queen to come with them, and she is too old; or what? D. F. MARRS.

South Bosque, Texas, May 9, 1883.

ANSWER.—1. I never destroy a comb on account of its age alone. I saw comb that I was assured came from a hive over 40 years old, and the owner pronounced the colony as vigorous and prosperous as ever.

2. She ought not to be replaced as long as she proves worthy, by her works.

3. Yes.

4. There are two reasons for such laying out; first, the neglect to give them full opportunity to work, and sometimes intense heat, and when the master does not do his duty they swallow large drafts of honey and hang outside of the hives in clusters, transforming that honey into scales of wax.

Is it Square-Dealing?

In looking over a bee paper (not the BEE JOURNAL), I saw the following: "Square dealing men." We, whose names appear below, do not know that we have a single dissatisfied person with whom we have had dealings; but if we have, such will confer favor by writing us kindly, and we will do our best to render satisfaction."—Among those names, is one with whom I have had a little "deal," and I fear that little was, at the best, "a deal too much." I will put the case by asking some questions which I wish answered through the BEE JOURNAL, as I have twice written the party and can get no reply from him.

1. Is it square-dealing to advertise a Langstroth frame, and send a Simplicity?

2. Is it square-dealing to sell colonies of bees that have had or been exposed to foul brood?

3. Would bees that were healthy and free from the disease in May, be likely to die of it in the fall?

4. If you should take frames of brood and bees from a hive and form a nucleus in June, and the old colony dies in the fall, and next fall you find that colony (the nucleus) has the foul brood, would you not think it came from the frames forming that nuclei, especially if those frames contained most of the foul brood?

5. If there were no bees within 4½ or 5 miles, domestic or wild, would there be any probability of their becoming infected from outside, or wild bees, and dying the same season?

6. Is there any redress for one who is thus imposed upon, unless through exposure, which most or all dislike to do, but right should supplant right and wrong. O. B. SCOFIELD.

York, Maine.

ANSWERS.—When I first saw that "square" department, I thought that it would only serve as a hiding place for some dishonest dealers to lurk in, where they could deceive many beginners of our pursuit. In it I found the names of men of whom I had heard grave complaints, and failed to find the names of some of our well-known reliable dealers. It reminded me of the French bastile, prior to the Revolution, where "most that were in, ought to be out, and many that were out, ought to be in." Right here I want to express a long harbored opinion, and that is, that he who succeeds in giving perfect satisfaction to all he deals with, will do great injustice to some of his customers or to himself. It is not right, and is an immoral method of seeking patronage to indulge the selfish in their unjust demands. Some just person must foot this indulgence bill. Besides this, it develops to a higher degree this wrong propensity in the indulged. Each dealer should draw his own line of justice, and in drawing that line, use his imagination with which to place himself in the outside party's place, and then live up to this, his highest conception of justice, and let the people decide by their acts whether or not he has drawn the line well. No man who does this duty, can honestly get into that "square-list" upon the terms it proposes. No man can deal with one hundred customes exactly on the square, and nothing more, and not have one dissatisfied. My advice is, do not try it. "Dare to do right; dare to be true," and you have nothing to fear.

I have dealt in supplies on quite an extensive scale for three or four years, as many well-know, and I have three very much dissatisfied customers, and I wish it was not out of place to give a history of the origin of their dissatisfaction; also of their Christian spirit in reporting the same, together with the direful things they are going to do, but never commence. It is also true that some dealers have not aimed to do justice, and under this head I will try to answer the questions, as best I can.

1. The Langstroth and Simplicity frames are calculated by their makers, to be one and the same frame. The words Langstroth and Simplicity apply to the styles of the hives, and not the frames.

2. No, sir.

3. *Bees* do not die of foul brood. It is a disease of the *brood*, and the colony would "peter out" in the fall if the disease was well under way, and of a malignant type in the previous spring. This is as I understand it; though I have never seen a case of foul brood.

4. I should.

5. Very little, if any, I should say.

6. I am not a lawyer, but as laws are based upon reason and justice, I would guess that damages could be collected in a civil court, if the parties were collectable. The distance the parties are usually a part, and the financial worthlessness of many small dealers, makes the legal course usually impracticable. The exposure course is in order, but there is no place, except in apicultural periodicals, through which to do it, and the nature of the complaint and defense are incompatible with the purposes for which said papers are published and read.

Wired Frames.

1. Will bees build comb in wired frames and have the wires in the centre of the combs?

2. Will they do it readily.

E. SANFORD.

ANSWERS.—Yes; if you properly press the wire into the foundation. If you do not mean to use foundation, do not use wire at all; it will not work on that plan.

2. Nearly all now know the advantages of the wires when used with foundation, and I have used them for years, and find them in no way detrimental. The Given press puts them to place more perfectly and quickly, but the hand method is excellent, and perfectly practical when done as I discribed it in the February number of the *Kansas Bee-Keeper*. I advise all not to buy frames filled with foundation, but wire their own frames and put the heavy foundation on by the method above referred to; it is safer and cheaper.

SELECTIONS FROM OUR LETTER BOX

Shipped His Bees.

I left Delta, Ohio, for this place on April 20, with 43 colonies of bees, and arrived here without the loss of a comb. MILES S. PRAY.

St. Johns, Mich., May 10, 1883.

Looking for a Grand Honey Harvest.

My bees have done well so far, and are in fine condition. I have had one swarm on May 2. Prospect are booming for white clover, and we are looking for a grand honey harvest.

J. G. NORTON.

Macomb, Ill., May 14, 1883.

Moving Bees in Cold Weather.

My 9 colonies of bees came through the winter all right. I bought 40 colonies more, which makes me 49 to commence with. Those which I wintered came through very strong. They had drones flying on the 10th of May. The 40 which I bought are not so strong, covering from 6 to 9 of my frames, which are 10¾x12½ inches, outside measure. A neighbor of mine bought 8 colonies of bees in what is termed the "patent" hive; he put them into a cave last fall. They were doing very well in the cave. Mr. M. told him that his bees would all be dead before spring, if he did not take them out of there; so he took them out and hauled them on a sled one-quarter of a mile, in the coldest part of winter, to an old house, and there buried them up with oats, as if they were ice. Long before spring, his bees were dead, and now he has only the old boxes and combs (for some one stole the honey) for the $20. The fruit trees are in bloom, and we expect a full crop of honey.

J. F. SELLERS.

Reynolds, Ill., May 12, 1883.

Apiary Destroyed by a Tornado.

May 9, about 5 p. m., this section was visited by a terrible tornado, which laid my apiary in ruins. I had 40 good colonies, and not a hive escaped the fury. They were carried up in the air, through the woods, and the hives smashed into "kindling-wood," combs and frames carried over a mile and dashed to atoms, and the bees drowned. You can imagine my feelings, for there is nothing I think so much of as my bees (except my family). I was just starting an apiary anew, after my disaster in Iowa. This was my first season here, and my apiary is my only dependence. I have 17 queens left, that I picked up, and bees enough for 5 or 6 colonies; the unhatched brood was nearly all chilled in the combs I saved, so it is dead and the bees are dragging it out. The tornado also damaged my house, twisted it out of shape some, and took about 20 feet off one of the side walls out of my bee cellar, so I had to get help and prop up the house, to keep it from falling over. The house is a frame one, just built, last October. I think the elements have been hard on me, but it might have been worse as none of my family were killed or hurt. E. J. SCOFIELD.

Hanover, Wis., May 12, 1883.

Parasitic Bees.

Enclosed I send a specimen of a fly, which I discovered among my bees. Please describe and explain through the BEE JOURNAL what they are. They seem very lively among the bees. I think they destroy eggs, and do mischief. GEO. D. FRESHOUR.

Canandaigua, N. Y.

[The insects are parasitic *bees*. Three specimens were received, of which one belonged to a distinct species from the other two. I should be glad to get more of each. These cuckoo-bees have not been known to infest the cells of the honey-bee, so far as I am informed, but are well-known depredators upon various wild bees. Their eggs are laid in the cells, and the strange larvæ are fed like those belonging to the host. It is not at all probable that these adult bees destroy the eggs already laid by the hive queen; though careful observation on this point would be valuable.—T. J. BURRILL, Champaign, Ill.]

Bee-Keeping in Florida.

I have spent the past winter in Florida, and will hazard the opinion that bee-keeping in that State will not be a success to any great extent, except in a very few localities where there is a plenty of mangrove, palmetto, etc. A few bees could probably be kept in almost any locality.

Bonair, Iowa. G. W. WEBSTER.

Bees Prospering.

My bees came through the winter with very little loss, and are now doing well, notwithstanding the cold and backward spring.

G. W. ZIMMERMAN.

Napoleon, O., May 15, 1883.

That Apiarian College.

I noticed an article on page 6 of the present volume of this JOURNAL, entitled "Another step in advance." The writer, Dr. Besse, says that it would be advisable to start an apiarian college under the auspices of the American Bee-Keepers' Society; each graduate to pass an examination before that society. I would like to ask the Doctor or Mr. Heddon to suggest a number of the leading questions for a person just starting to keep bees to ask himself, and be able to answer, so that he may be thoroughly acquainted with the science of bee-culture. Mr. Heddon says in an article on page 73, that the art is acquired by the majority. Of course it is, but I think it would be a great deal easier to acquire the art after or when a person is studying the science with the art. A very large number start to keep bees every year, and I might say that a large number of them never get past the first year or two, unless they just swarm them in boxes, and let them have their own way. I think a great deal of good could be done if some one that is more able than myself would take up the subject and do it justice. WM. H. WESTON.

London, Ont.

Cannot be Beat.

I think the BEE JOURNAL cannot be beat. I would not lose a number for the price of it a year.

F. M. TAINTOR.

Elm Grove, Mass., May 15, 1883.

Bees Wintered Without Loss.

My 35 colonies of bees were packed, last fall, by putting chaff cushions in the caps, and they wintered all safely; I did not even lose a queen. They are now doing well, and there is a good prospect ahead. My experience teaches me to keep a laying queen in the hive, if possible, all the time, Mr. Heddon to the contrary, notwithstanding. ISAAC SHARP.

Waveland, Ind., May 16, 1883.

Spring Management, etc.

I have a few questions which I would like to have answered in the next number of the BEE JOURNAL. They are of great importance to bee-keepers at this time of year, especially those that have several hundred combs and but very few bees; which is the case here with several. One man at Mecosta, Mich., put in the cellar 54 heavy natural swarms in the fall; on the first of May he had only 10 weak ones left; another at Coral, Mich., packed 38 natural swarms in straw; he has only 7 weak ones left. These men want to know how to build up these little handsfull of bees, so as to make use of these combs.

1. Is it any advantage to feed this honey back to them, the combs can be placed in the caps of the hives, so that the bees can have access to them very easily, and those on the outside be none the wiser, and will take all of the honey out of the combs and clean the combs up some too; but is it any gain? Will the bees breed any faster for having plenty of honey in the hive?

2. For all of the advertising of queens, none can be found for sale at present; although all queen breeders are willing to receive your orders for queens, which will be filled in the order received, sometime in June or July. How early can queens be reared in this latitude? How soon should queen-rearing be commenced, when there is such a demand for them? Cannot queens be reared successfully at any time, when drones are plentiful? I have drones in any quantity at this date.

3. What do the experienced apiarist think of Alley's new method of queen-breeding? I have a colony engaged in the business already. I think it will be a grand success.

S. J. YOUNGMAN.

Cato, Mich., May 15, 1883.

[1. In the excellent article on page 260, by Mr. Doolittle, will be found instructions for spring management, building up weak colonies, etc.

2. It is too early in this latitude to think of shipping queens, even if they were ready for shipment. The nights are cold; and the exposure they would get would be detrimental.

3. As you are rearing queens according to the plan given in Mr. Alley's book, of course there is no necessity of further answers in detail. We refer you to the book, which meets with very general approval by apiarist everywhere.—ED.]

Splendid Honey Harvest Expected.

My colonies are in splendid condition; full of brood, and strong in bees. The locusts are just opening, and the surplus arrangements are placed on; the hives have a surplus of fruit bloom honey; the first of the kind in three years (that is, surplus above what they needed for rearing brood). It is fine weather now, but we had cool weather up to last week; some days it has been too cold for bees to fly. We hope, and have the indications of a splendid honey harvest; white clover looks well, and basswood trees are full of buds.

J. W. STURWOLD.

Haymond, Ind., May 18, 1883.

Troubles in Transferring.

I had 2 colonies in box hives; I transferred them, last week, into movable frame hives, according to your instructions, and succeeded beyond my expectations, without any bee-vail, and received no stings, but I do not understand the way they acted. The first hive was very strong; a peck of bees, at least, and five queen-cells, and one was capped over, and two others with larvæ in them. I put eight frames in the hive with most all the brood, and very little honey. I placed the new hive on the old stand, in the same place, and dumped the bees in front of the hive, which were about a peck in bulk; part of them went into the hive, and some of them raised in the air and clustered about 30 yards from the hive. There was about a quart of them. I hived them at once; went into dinner, and when I came out they were clustered in one corner of the hive; in about half an hour they were gone, perhaps to the old hive. They would not go in the hive, so I raised the hive in front and they went into the chambers outside of the division-board, and staid there until I took them out. The next colony I transferred acted much like the first; it had about a half-peck of bees; they had no queen-cells, but some brood. I emptied them in front of the hive; they did not go in the hive very good; some of them crawled over to the other hive, which was about a foot away, and clustered on the hive in large bunches. I brushed them down in front of the hive, but they would not go in. I left them there all night, still they would not go in; so the next day I took the cover of the hive, placed the boxes over the chambers and drummed and smoked them up and dumped in front of the other hive, which, by the way, had but few bees in it, so they went into the hive (at least some of them did) and staid in. I do not understand why they acted so. To-day, which is about a week since I transferred them, the strong colony gave a swarm. I hived it in good time; in ten minutes they were back to the same hive they came from. C. VANCULIN.

Delaware, Del.

A Degenerated Langstroth Hive.

MR. EDITOR:—Will you please to give me your reasons for calling the Simplicity hive a "degenerated Langstroth hive?" I am only a beginner in the art of bee-culture. I want to learn all I can, and do not like to start with the wrong hive. I read your JOURNAL with great interest, and could not do without it. Please answer through the BEE JOURNAL.

O. H. CARPENTER.

Camanche, Iowa, May 17, 1883.

[Our correspondent has evidently been *dreaming*. The Simplicity hive is to all intents and purposes a Langstroth hive. It uses the Langstroth frame, and only gets its name by the manner of making the outer box. We have never used any such language, either in the BEE JOURNAL or in public speaking. Our correspondent should have designated the place in the JOURNAL where it might be found, or given the time and place, if we were reported to have used such a phrase in public speaking. We suspect that Mr. Carpenter has been *dreaming*, and this time is "caught napping."—ED.]

How the Bees were Prepared for Winter.

We packed 5 colonies of bees in chaff and 5 with planer shavings, 4 inches in the bottom and sides, and 10 inch chaff cushions, on A. I. Root's plan. On October 27, the snow drifted over them; we shoveled them out in February, during a thaw, and some of the bees flew out. We examined them and found them all right. In April, we found some wet in the bottom of the hive; the cushions were moldy on top, but the bottom was dry and warm, and 4 showed signs of dysentery. We cleaned the hive of dead bees, but we lost 4 colonies, and 4 more are weak. At this date they have brood. I think if we had put them up out of the snow, they would have been dry; the snow is so heavy here, with a damp atmosphere, it will not do to let them be covered up in snow as they do in the west. We put 38 colonies in the cellar on November 15, and took them out May 3. They were confined 169 days; 4 were dead; 2 of them starved with plenty of honey on the outside combs, the mat laid close down on the frames. I did not cut holes in the combs; 2 had dysentery, and several showed signs of it. Some of them were stronger when they came out, than when they went in. Others were weak; all had plenty of honey. Since putting them out, 2 more have died, and we doubled up two more; most of them had brood, and some had frames, capped over. They are bringing in pollen, but it is very cold and windy. Our cellar is under the house we live in; the thermometer stood at 36° to 40°; the hives were put up over the potatoes; some of them were as bright as they were last fall. We think that the cellar was too cold. We put a small stove in, to dry out the moisture. We had a pipe under ground to let in air, some 60 feet from the house, below the frost. The bees were in Root's Simplicity hives, with the bottom board up-side-down, with half-inch opening; burlap mat to cover the frames; cover up-side down. The bees in the cellars came out strong and better than last year. The bees that were wintered out on the summer stands in summer hives are all dead. JAS. H. TILLEY & BROS.

Castle Hill, Me., May 14, 1883.

Will they Rear a Queen?

I have a light colony that became queenless a week ago; I shall unite it to another.

1. If I give the queenless colony brood with eggs and larvæ, or if they have it already, will they rear a queen before drones have appeared?

2. If I give them a frame of brood with eggs, larvæ, and filled drone comb, will they rear a queen?

3. Will a colony rear a queen when its own hive contains neither drones nor drone comb, but when drones are in other colonies near?

4. In forming a nucleus, is it necessary to place drone combs in the nucleus hive? CHAS. F. WILLCOTT.

Exira, Iowa, May 5, 1883.

[If you have no prospect for getting a queen soon, it will be better to unite the queenless colony with any other weak one having a queen.

1. Drones will be on hand by the time the bees have reared a queen. Many have them now.

2. Of course they will immediately rear a queen, if you give them the means of doing so.

3. Yes.

4. No.—ED.]

All Old Bees.

I have been testing late and early breeding. My bees are all 8 months old; they bred none after August, last year, and very few young bees have taken the field yet, which is 8 months and 10 days; therefore I will not be very uneasy after this if I do not get any breeding in September. My Italians will be ready for the honey flow, if we get fair weather. They are not so nervous as blacks, and pull through bad weather better. I have tested the two distinct races pretty well, and can give their pedigree any time. I kept a standing offer, last year, of $5 for any person being attacked with an Italian bee; if it had been in favor of the blacks, I should soon have been in poverty. To explain the above, we got no fall crop here, and the way I fed up was on 6 frames; there was no breeding; neither could be. I was afraid, but apparently without cause.

CHARLES MITCHELL.

Molesworth, Ont., May 12, 1883.

Backward Spring in Maine.

Four inches of snow fell here today. It has been one of the most backward springs that we have had for a long time. My bees are quite weak, owing to the cold backward spring. G. W. DUNBAR.

North Anson, Me., May 15, 1883.

☞ The Marshall County Bee-Keepers' Association meets at Marshalltown, Iowa, Saturday, May 26, at 10.30 A. M. The place of meeting is at the Sheriff's office. Subject for discussion: "Summer Care." The meeting of March 24th was one of much interest. Five new members were admitted into the Society. All present seemed to realize it was "good to be there," and the general feeling was to build up a good first-class society.

J. SANDERS, *Sec.*

BOOK CLUBBING LIST.

We will supply the **American Bee Journal** one year, and any of the following Books, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The Weekly Bee Journal,	$2 00..	
and Cook's Manual, 7th edition (in cloth)	3 25..	2 75
Cook's Manual, (in paper covers)	3 00..	2 50
Bees and Honey (T.G. Newman) cloth	2 75..	2 50
Bees and Honey (paper covers)	2 50..	2 25
Binder for Weekly Bee Journal	2 75..	2 50
Apiary Register for 100 colonies	3 50..	3 00
Apiary Register for 200 colonies	4 00..	3 50
Dzierzon's New Bee Book (cloth)	4 00..	3 50
Dzierzon's New Book (paper covers)	3 50..	3 00
Quinby's New Bee-Keeping	3 50..	3 25
Langstroth's Standard Work	4 00..	3 75
Root's A B C of Bee Culture (cloth)	3 25..	3 00
Alley's Queen Rearing	3 25..	3 00
Scribner's Lumber and Log Book	2 35..	2 25
Fisher's Grain Tables	2 40..	2 25
Moore's Universal Assistant	4 50..	4 25
Honey as Food & Medicine, 50 Copies	4 00..	3 75
Honey as Food & Medicine, 100 Copies	6 00..	5 50
Blessed Bees	2 75..	2 50
King's Text Book	3 00..	2 75

The **Monthly Bee Journal** and any of the above, $1 less than the figures in the last column.

☞ Renewals may be made at any time; but all papers are stopped at the expiration of the time paid for, unless requested to be continued.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......$1 00
" 100 colonies (220 pages)...... 1 50
" 200 colonies (420 pages)...... 2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1 year, for the Weekly, with **$4**, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For **three** subscribers, with **$6**, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For **four** subscribers, with **$8**, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For **five** subscribers, with **$10**, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

☞ Our stock of back numbers of this volume are now getting very low. Please look over your numbers, and if any are lacking, send us a postal card, giving the date of those you want, and we will send them, if not all gone. We give this notice, because, last year, several left it until the end of the year, and then requested us to send the missing numbers. Then it was too late, the numbers being all gone. Look them over *now*, and you may get them completed.

Foul Brood Pamphlet.—Wishing to be relieved of sending out my pamphlet on Foul Brood, I have made arrangements with Mr. T. G. Newman to supply them to the bee-keeping fraternity desiring them.

A. R. KOHNKE.

Youngstown, O., April 25, 1883.

☞ Mr. Alley's new book on Queen Rearing will hereafter cost $1.25

☞ We have a few copies of our pamphlet entitled "*Bee Culture*" left, and have reduced the price from 40 to 25 cents each, or $2 per dozen.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Will Make it an Even Dozen.—Mr. W. H. Brearley, of the Detroit (Mich.) *Evening News*, who has personally conducted $22,000 round trip excursions "from Detroit to the Sea," every year for the past seven years, and who is to take three more this year in June and July, has made the ascension of Mt. Washington nine times, and, this year, proposes to make it an even dozen.—*Adv.*

Bingham Smoker Corner.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent post-paid for **$1.75.** Address,

BINGHAM & HETHERINGTON,
Abronia, Mich.

All Excelling. — Messrs. Bingham & Hetherington, Dear Sirs:—I am now selling your Smokers almost exclusively. You are excelling yourselves in smokers all the time.

Respectfully, J. G. TAYLOR.
Austin, Texas, May 10, 1883.

Cyprians Conquered.

All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's "Conqueror Smoker" did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham.

G. M. DOOLITTLE.
Borodino, N. Y., Aug. 15, 1883.

Special Notice.—We will, hereafter, supply the Weekly BEE JOURNAL for one year, and the seventh edition of Prof. Cook's Manual of the Apiary, bound in fine cloth, for **$2.75**, or the Monthly Bee Journal, and the Manual in cloth for $1.75. As this offer will soon be withdrawn, those who desire it should send for the book *at once*.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

☞ May we ask you, dear reader, to speak a good word for the BEE JOURNAL to neighbors who keep bees, and send on *at least one new* subscription with your own? Our premium, "Bees and Honey," in cloth, for one *new* subscriber to the Weekly, or two for the Monthly, besides your own subscription to either edition, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

E. T. LEWIS & CO., Toledo, Ohio,
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PATENT FOUNDATION MILLS 6-inch, $10.00. 10-inch, $15.00.
18A8t W. C. PELHAM, Maysville, Ky.

THE HANDY BOOK.

Read the opinion of one of the most eminent writers on bee matters:

Bound Brook, N. J., May 4, 1883.

FRIEND ALLEY:—Handy Book received. I am happy to say that I consider that it tells more on the vital subjects of rearing Queens and managing bees so as to take honey, than any book now before the public. It seems to be filled with just those things which practical men find out about their business in a lifetime of work, but which they generally don't tell the dear public.

J. HASBROUCK.

The HANDY BOOK has received from those most competent to judge of its value, more praise than any book now in print. Send for our Circular and get their opinions.

HENRY ALLEY, Wenham, Mass.
21Atf

A NEW BEE BOOK!

BEES and HONEY,
OR THE
Management of an Apiary for Pleasure and Profit; by
THOMAS G. NEWMAN,
Editor of the Weekly Bee Journal.
925 West Madison Street, Chicago, Ill.

It contains 160 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey Bee, and at the same time produce the most honey in its best and most attractive condition.

Appreciative Notices.

A neat and abundantly illustrated hand-book of apiculture.—American Agriculturist, N. Y.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Tenn.

Contains all the information needed to make bee-culture successful.—Eagle, Union City, Ind.

Just such a work as should be in the hands of every beginner with bees.—News, Keithsburg, Ill.

Valuable for all who are interested in the care and management of bees.—Dem., Allegan, Mich.

Engravings are fine. Gotten up in the best style, and is cheap at the price.—Farmer, Cleveland, O.

It comprises all that is necessary for successful bee-culture, save experience and good judgment. —Daily Republican, Utica, N. Y.

Written in an interesting and attractive manner, and contains valuable information for all readers, even though they be not directly interested in the care of bees.—Sentinel, Rome, N. Y.

It is a valuable and practical book, and contains a complete resume of the natural history of the little busy bee, as well as of all that one needs to know in their care and management.—Chicago Herald.

Contains a vast fund of information in regard to bee-culture. He who would keep abreast of the times must keep posted in all the improvements in his line. We advise all interested to get a copy of this book.—Daily Times, San Bernardino, Cal.

It embraces every subject that will interest the beginner. It describes all the newest discoveries in the art by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive form. It is embellished with beautiful engravings, and is the most perfect work of the kind, for the price, that has ever come under our notice.—Farmer, Lancaster, Pa.

PRICE—Bound in cloth, **75 cents**; in paper covers, **50 cents**, postpaid.

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OPIUM Morphine Habit Cured in 10 to 20 days. No pay until cured. J. L. Stephens, M. D., Lebanon, O.
18A4t

W. Z. HUTCHINSON,
Rogersville, Genesee County, Mich.,
is now receiving Italian Queens from the South (for particulars see advertisement in the BEE JOURNAL of April 18), and can send them by return mail at the following prices: Before June 1st, untested queens will be $1.50 each: during June, single queen $1.25, or six for $6.00; after July 1st, single queen $1.00, six for $5.50, twelve for $10.00. Tested queens (reared last season in the home apiary), before June 1st, $3.00 each; during June, $2.50 each; after July 1st, $2.00 each. Safe arrival guaranteed. Make money orders payable at Flint, Mich. 17aow tf

OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

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THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

The New National Chemist.

Prof. H. W. Wiley, of Purdue University, has resigned the chair of chemistry there, to accept the position of chemist in the National Agricultural Bureau at Washington. Prof. Collyer was removed by Commissioner Loring, in order, it is alleged, that a more intense sorghum sugar man might be placed in charge of the chemical laboratory. So says an exchange.

He must remember that there are other equally important interests requiring the attention of the National Chemist, and give these due credit, as well as that of sorghum-sugar!

This Wiley is the one who invented the "paraffine comb and glucose" story, as a "scientific pleasantry," and, with it, deceived Gov. Porter, of Indiana, who, in his addresses before the Farmers' Institutes held at Columbus and Crawfordsville, reiterated the fraudulent fabrication, supposing, of course, that he was backed up by some authority, instead of being deceived by a *wily*, cunning and crafty un-*scientific joker*, the *sound* of whose very name is a suggestion.

Webster thus defines the word "wily:" "Full of wiles, tricks, or stratagems; using craft or stratagem to accomplish a purpose; mischievously artful; subtle; as, a *wily* adversary." There was no need of adding an "*e*" to that word!

Any one who could invent the lie about "paraffine comb" being made and "filled with glucose by appropriate machinery," and most likely laugh in his sleeve at those, who. being deceived by it, were telling it as a sober fact, and then enjoy the *joke* for months, without doing the least thing to undeceive his dupes, is unworthy the name of man—for he lacks both manhood and integrity! Yet this is he who is now National Chemist, in charge of the National Chemical Laboratory, and what for? An exchange says it is because he is a "more intense sorghum-sugar man" than his predecessor.

Is he so "intense" that he must distort facts, manufacture a story, and publish a *lie* about honey, in order to serve his sorghum-sugar interest? Is this the key to his bold attack on comb honey?

Is he *such* an "intense sorghum-sugar man" that it becomes necessary to calumniate, by false reports, that God-given and pure sweet—honey—in order to make him the National Chemist? If that is the measure of his "intense" ambition—Heaven pity his poor contracted soul! It matters not what station such an one may occupy, all honorable men will unite in execrating him.

"Go! mark him well!
For him no minstrel rapture swell;
High though his titles—proud his name—
Boundless his wealth, as wish might claim—
Despite those titles, power, and pelf!
The wretch, concentered all in self.
Living, shall forfeit fair renown;
And, doubly-dying, shall go down
To the vile dust from whence he sprung—
Unwept, unhonored, and unsung!"

The Senses of Bees.

Sir John Lubbock, whose very interesting book we noticed in the BEE JOURNAL last fall, has recently read to the members of the Linnean Society an account of his further observations on the habits of insects made during the past year. The two queen bees which have lived with him since 1874, and which are now, therefore, no less than 8 years old, are still alive and laid eggs last summer as usual. His oldest workers are seven years old. The American *Naturalist* for April has the following particulars:

Dr. Muller, in a recent review, had courteously criticised his experiments on the color-sense of the bees; but Sir John Lubbock pointed out that he had anticipated the objections suggested by Dr. Muller, and had guarded against the supposed source of error. The difference was, moreover, not one of principle, nor does Dr. Muller question the main conclusions arrived at, or doubt the preference of bees for blue, which, indeed, is strongly indicated by his own observations on flowers.

Sir John also recorded some further experiments with reference to the power of hearing. Some bees were trained to come to honey which was placed on a musical box on the lawn close to the window. The musical box was kept going for several hours a day for a fortnight. It was then brought into the house and placed out of sight, but at the open window, and only about 7 yards from where it had been before. The bees, however, did not find the honey, though when it was once shown them they came to it readily enough. Other experiments with a microphone were without results.

Every one knows that bees when swarming are popularly, and have been ever since the time of Aristotle, supposed to be influenced by clanging kettles, etc. Experienced apiarists are now disposed to doubt whether the noise has really an effect; but Sir John suggests that even if it has (with reference to which he expressed no opinion), it is possible that what the bees hear are not the loud, low sounds, but the overtones at the verge of or beyond our range of hearing.

As regards the industry of wasps, he timed a bee and wasp, for each of which he provided a store of honey, and he found the wasp began earlier in the morning (at 4 a. m.), and worked on later in the day. He did not, however, quote this as proving greater industry on the part of the wasp, as it might be that they are less sensitive to cold. Moreover, though the bee's proboscis is admirably adapted to extract honey from tubular flowers, when the honey is exposed, as in this case, the wasp appears able to swallow it more rapidly. This particular wasp began work at four in the morning, and went on without any rest or intermission till a quarter to eight in the evening, during which time she paid Sir John 116 visits.

Putting on the Sections.

Among beginners and amateurs the inquiry is often heard, "When shall we put the sections on our hives?" Mr. Dougherty answers this question as follows in the *Indiana Farmer:*

> There can be no fixed time for putting on the surplus box, only as the season develops itself showing a surplus of honey coming in, and the necessity of giving room for its storage. The bees will seldom commence in the sections so long as there is any available space in the brood chamber in which to put the honey, and where the combs are not well filled with brood, the better plan is to occupy the extra space with a division-board, increasing the brood space as the queen becomes cramped for room in which to lay. Usually the first indications that the bees are gathering a surplus of honey, is the filling of the combs next to the top-bars of the frames, lengthening out the cells, showing the white, new comb which they are adding to fill in all of the unnecessary space.
>
> Bees seldom get a surplus of honey before the coming of white clover, although where locust is abundant they sometimes get quite a surplus from this source. Too much room should not be given at first, as too much space at first may lower the temperature to such an extent as to retard brood-rearing. The better plan is to give but little room at first. After they have commenced in this nicely, then give more room, as required. They are at times loth to commence work in the boxes, and where a colony shows a hesitancy in occupying the boxes, some inducement should be given them; such as a section well filled with comb. We usually have a great many sections left over from one season to another, with which to encourage them, but have had to resort to the plan of cutting out a small piece of board and fastening it into the center section. We seldom bother with anything of that kind now, for where we find a colony that does not enter the sections at once, we lift them off, and hang on a full set of empty combs for extracting. After they have got well started to going above, they will most generally enter the boxes at once on there being replaced.

Apis Dorsata Coming.—Mr. A. Schroeder, one of our subscribers in Trieste, Austria, under date of May 2, 1883, writes as follows: "Mr. G. Dathe, of Germany, has arrived in Joppa with 4 colonies of *Apis-Dorsata.* He is very much disappointed in the fact that those bees will not build combs, neither will they stay on them. One colony decamped, and he was obliged to cut the queen's wings. I hope he will reach Europe with his bees alive, to have them to experiment with for the sake of science. I do not believe the bees are worth anything for bee-keepers. Bees are doing well here. Strong colonies wintered well, and are in swarming condition now, if the weather would permit. I will build up nuclei into strong colonies, etc. We have never very cold winters here."

Seasonable Hints.

Mrs. L. Harrison gives the following directions in the *Prairie Farmer* for the management of bees at the present season:

> Eggs and young larvæ disappear very mysteriously at times when there is a cessation in the flow of honey, and also when there are too few bees to hover and nourish it. A few days ago we gave a weak colony a frame of comb containing eggs, larvæ, and hatching bees. On examining them a few days afterward we found sealed brood, and young downy bees crawling around, but the cells were empty where the eggs and larvæ had been. The bees had been playing cannibal, breakfasted on the eggs and dined on the young larvæ. They had plenty of stores, but were lacking in bees necessary to produce warmth and nurses for the young, and so utilized them by devouring them. If chipping brood is given to weak colonies first, and as soon as it is hatched, eggs and larvæ are put in, there will then be bees of the right age to nurse and care for it.
>
> Great care should be taken lest we injure our bees more than we do them good by meddling with them. If brood is taken from strong colonies, reducing them to the condition of the weak ones, great harm is done, for the brood given to the weak colonies may be entirely wasted. When the warm weather has come to stay, we may take brood with impunity, and not before. In the interim we must take care that the weak have plenty of honey in their hives, and feed the strong whenever they will accept it.
>
> Bees are now carrying a great deal of water, and venture out for it when the mornings are quite cool. It will save the life of many a bee if drinking vessels are filled with warm water. We have some small kegs in the apiary which are filled with water, and some old muslin is put into them with a portion hanging over the sides, serving the purpose of syphons, and the bees suck the water from the muslin on the sunny sides of the kegs without danger of drowning.

☞ We notice that quite a number of local papers have copied our article on "Bees and Honey in Ancient Times" from No. 19 of the BEE JOURNAL. It will help to educate the masses on the uses of honey, and if there are any more persons who think they can prevail upon local editors to get it inserted, we can send them extra copies free for that purpose. Just send a postal card for No. 19, and it will be sent at once. Be sure to give your name and address.

Chickens Eating Drones.

Mr. Dadant, says the *Prairie Farmer*, "once had an apiary located on the side of a hill and fenced. He also had, at the same time, 500 chickens occupying the some enclosure with the bees. He had his hives raised from the ground, and at night the hens brooded their chickens under them. He also taught his chickens to eat drones, by feeding them brood and hatching drones. He says he has seen a rooster pick them off as they were clustered closely together for mutual protection against their female prosecutors, as all bee-keepers have seen them do, until he could swallow no more, then rest a bit, stretch up his neck, and go for them again—and if corn was thrown to him he would not notice it."

☞ The weather for the past few days, in the whole Northern States, has been cold, windy and wet; but with a warm sunshine added to the well-watered ground, the flow of nectar will be abundant. It is true that the colonies of bees have become weaker, and in some cases "spring dwindling" has been severely felt, but, on the whole, an abundant honey harvest is to be expected.

☞ The Annual Exhibition of the Northamptonshire Bee-Keepers' Association of bees, hives, honey, and bee appliances, will be held in connection with the Northamptonshire Horticultural Society, on Monday and Tuesday, Aug. 6 and 7, 1883, in the grounds of Delapre Park, Northampton, England. Practical illustrations of manipulating with live bees, showing the best method of driving bees, making artificial swarms, transferring combs from straw skeps to bar frame hives, finding the queen, extracting the honey without injuring the bees or combs, etc., will be given at intervals during the show days, in a tent specially constructed, so that visitors can see the whole manipulations without any danger of being stung. Prizes will be awarded amounting to over $50.00. Entries will be received, and further information given, on application to Mr. James Davies, 33, Semilong, Northampton, by sending stamped addressed envelope. Entries close on July 31, 1883.

☞ Mr. Alley's new book on Queen Rearing will hereafter cost $1.25

Bee-Culture in India.

The London *Times* gives the following information respecting the bee industry in India, gathered partly from the *Indian Agriculturist*. The details were obtained by Mr. John Douglas, superintendent of telegraphs, from Mr. Morgan, deputy conservator of forests, and are noteworthy from the light they throw on the modes of collecting wild honey:

The best honey producing flower of Southern India, is the strobilanthes, which not only forms the principal undergrowth of the sholas, both temperate and tropical, but spreads over the grassy slopes of the higher elevations. There are immense numbers of species in this genus, and they almost all flower once in seven years, dying down entirely, and afterward a fresh growth springing up from seed. Whenever any species of strobilanthes flower, colonies of bees migrate from all parts of the country to feast on the honey, and rear their young brood. At such times honey becomes plentiful and cheap, and as the strobilanthes honey is of the finest quality and flavor, rivaling that from the famous Mount Hymettus, it is eagerly sought after by the Todas of the Neilgherry Hills, and, in fact, by all aboriginal tribes. The year 1879 was such a season for honey that it sold at the rate of four annas per imperial pint, whereas its usual price is from eight to ten annas. This honey, in the cold climate of the Neilgherries, crystalizes in from a fortnight to three weeks, when the flavor becomes richer and finer.

In the Wynaad, as soon as the moon has waned sufficiently, great preparations are made to take the honey. Bamboo and rattan ladders are constructed, sometimes of astonishing length, and at nightfall, after 9 p. m., for the bees do not go to rest until then, as you will find to your cost if you disturb them, the jain (honey) kurumbars proceed to the burray, and and having erected their ladders, if they have to climb upward or suspend them downward, arm themselves with torches and knives, and sever the combs from the rocks or branch. The disturbed bees, meanwhile, roused by the glare of the torches, desert the combs and buzz aimlessly about, even on the persons of those engaged in taking the combs, but never attempt to sting unless crushed or hurt. The combs are then lowered down in baskets, the karumbars feasting on the larvæ, which tastes something like cream, while the fish, which swarm in thousands when the hives are built over a river, have a glorious feed on the grubs and bees that fall into the water and float helplessly down the stream.

The Coorgs make some attempt at bee-culture, and practice the industry to some extent in their own homes. The bees are domesticated, and the hives, which are of a very primitive description, made merely of the hollowed out trunks of trees, are placed near the houses. The Coorgs have, however, no notion of collecting the surplus honey by any of the contrivances now in use.

In Cuddapah wild honey is collected also from the cliffs and ravines of the district. The process adopted in both is perilous and exciting, and the Yanadies alone are able to climb into the difficult and apparently inaccessible places over perpendicular cliffs, in some places from 100 to 200 feet in height. They do this by the aid of a plaited rope, made of young bamboos tied together. This rope sometimes gives away, the result being a terrible accident. It is a very nervous sight to watch the men climbing up these frail supports, and it reminds one of the egg-collecting process in northern latitudes. The men from below look like little babies hanging midway, the rope being fastened on the top of the cliff above by means of a peg driven into the ground, or to the trunk of a tree, the man swinging midway with 100 feet or so above and below him, and armed with a stick and a leather basket. The Yanady first burns some grass or brushwood under the hive, by which he pokes with his stick, holding out his basket at the same time to catch the detached portions of comb. When the basket is full he shakes the rope, at which signal his comrades above draw him up. The bamboo ropes are left to hang often for years, until they rot away, for a rope of this kind is never used twice, a fresh one being made on each occasion, and at each place.

South Canara is also a great honey district. The honey and wax have, however, but little local value, a mound, about 25 pounds, only fetching R. 2 and R. 16. It is thought that much might be done to open up the industry by exporting the honey and wax to England, the latter being a valuable product, and one for which there is always a demand. The trade, at present in Indian honey, is almost entirely confined to wild honey; but as the keeping of bees is an industry requiring little or no capital, it is especially adapted to the people of India.

Should the returns obtained from the inquiries now made and set on foot by Mr. Douglas, show that it is worth while to introduce this industry in a practical form, then Mr. Buck, the whole subject having been placed under his department, may possible see his way to making a decided effort to interest the people in systematic bee-culture with a view to the trade in honey and wax becoming ultimately a profitable one to the country.

* * *

☞ Do not send coins in a letter. It is dangerous and increases the postage unnecessarily. Always send postage stamps, for fractions of a dollar, and, if you can get them—*one-cent* stamps; if not, any denomination of postage stamps will do.

Philadelphia Bee-Keepers.

Mr. John Shallcross, of Philadelphia, sends us the following item of news from the *Herald:*

The Philadelphia Bee-Keepers' Association met at the residence of Dr. Townsend, the President, 1514 Vine street, on Monday evening, May 14. An interesting essay upon the bee and honey, from the earliest times, was read by Dr. Townsend. Questions of a practical nature were read from the question box, and were answered and discussed by the members. Two handsome charts of the "anatomy and physiology of the honey bee, and its relation to flowering plants," by Mr. Frank R. Cheshire, recently procurred from England by the Association, were exhibited and explained by the President. An observatory hive, with a nucleus colony of bees in full operation, was also exhibited by Dr. Townsend. Bee-keeping in Philadelphia is making considerable progress.

* * *

Ladies as Bee-Keepers.

Prof. A. J. Cook, of Lansing, Mich., gives the following on this subject in the New York *Tribune:*

Mr. Heddon constantly complains of over-praise of bee-keeping. He says they all do not "get there"—to success, I suppose he means. Of course it is not all sunshine in apiculture. Severe winters mow down the colonies. "Foul brood" devastates and unfavorable seasons, not infrequently, make the profits microscopic; while, worst of all, many lack true persistence to "overcome" till delayed success has chance to crown their efforts. Yet I could name hundreds, amateurs and specialists, who get pleasure and no small gain from bees, and they include many ladies. For instance, Miss West, of Flint, Mich., whose father owns 100 colonies, is a teacher in the public schools. Last June Mr. West was prostrated with typhoid fever, and his daughter took the whole care of the apiary during this most active season, and with success, though she cared for her father besides. A friend of Miss West taught a district school, and for recreation cared for a few colonies of bees, which in no wise interfered with her duties as teacher. The income from the bees exceeded that earned as teacher. Of course, many will not succeed in bee-keeping—only those who are punctual and observing of the needs of the myriad laborers whom they oversee. But to use this as an argument against the business, would be virtually to condemn every employment.

* * *

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

CORRESPONDENCE

For the American Bee Journal.

Bees and Honey in Lucas Co., Iowa.

A. REUSCH.

The following Table represents the bees and honey in Lucas Co., Iowa:

Apiaries.	How Wintered.	No. of Colonies Fall, 1881.	No. of Colonies Spring, 1882.	No. of Colonies Fall, 1882.	Pounds of Extrac. Honey.	Pounds of Comb Honey.
1	In Cave	200	200	170	....	15,000
2	Sum. Stand	100	88	132	....	10,000
3	Sum. Stand	19	19	56	1800	2,200
4	....	18	17	23	1240	775
5	Cellar	14	14	30	....	1,600
6	Sum. Stand	13	11	35	....	1,500
7	Sum. Stand	8	8	8	....	1,400
8	Sum. Stand	14	10	18	1150	......
9	Sum. Stand	14	14	35	600	400
10	....	5	5	12	375	375
11	....	4	2	19	....	750
12	....	8	8	22	60	640
13	House	7	6	13	....	700
14	Cave	11	9	28	....	615
15	Sum. Stand	4	3	9	....	600
16	Sum. Stand	3	3	8	48	500
17	Sum. Stand	4	4	16	250	300
18	....	3	3	9	150	350
19	Cellar	5	5	7	....	500
20	Sum. Stand	5	5	17	....	485
21	....	3	3	6	265	135
22	....	3	3	7	....	200
23	....	1	1	5	....	120
24	....	3	3	7	....	100
25	....	5	2	3	12	65
26	....	3	2	7	....	70
		477	448	702	5950	39,380

For the American Bee Journal.

The Standard Langstroth Frame.

JAMES HEDDON.

If I am not misinformed, Mr. Langstroth, after inventing his hive, issued a book, in which he gave the exact dimensions of his hive and frame. This was Mr. Langstroth's standard. The book did the work of introducing that hive and frame. That book gave the dimensions that I claim are the standard. Soon after, the National Bee-Hive factory was started at St. Charles, Ill., and made and sold these hives on the most extensive scale of any house in the United States, thousands of bee-keepers bought them, and have patterned after them, or, at least, the frame, ever since.

Mr. G. M. Alves, of Kentucky, submits the following propositions why 17⅝, and not 17⅜ inches, should be universally accepted as the standard length:

1. There are more Langstroth frames in use of that length than any other.

2. The largest manufacturers of hives, and the greatest number of them, have adopted this size.

3. This size will exactly take eight standard one-pound sections—a very important consideration with those who prefer to take their honey in frames.

4. The editors of the principal bee periodicals have, and do now, give this size as the standard, and (on the authority of the Editor of the AMERICAN BEE JOURNAL), Mr. Langstroth himself has approved the change. See AMERICAN BEE JOURNAL for 1882, page 251.

In reply, I will say: First, Mr. Alves is undoubtedly mistaken about there being very many more of the altered Langstroth frames in use than of the old standard. I have been agreeably surprised to find a much larger number of the true standard in use than I expected. But if the question of what *is* the true standard frame rests with numbers of them, then I will build a large "brick factory" run by an "engine," and make enough of the 17⅜ to make that once more the true standard frame. I had heard that this principle applied to lying, that is, a man could tell a lie so many times that he would finely believe it himself, but until now I did not know that the true standard frame could be made the false one by making enough frames of an odd size. I dislike to make so many of these frames as to make Mr. Alves change all of his, but I see no other way to avert the trouble of changing my hundreds of hives and the thousands I have sold to others.

2. I admit that the largest manufacturers of hives have adopted the mongrel size, and for aught I know, originated it, but large folks are often in the greatest error, and "truth is often on the scaffold, and wrong often on the throne." This proves nothing but the mistaken method of Mr. A.'s reasoning.

The question is, "What is the *standard Langstroth* frame?" Not Smith frame, or Brown frame, or Jones frame? Let us stick to the subject.

3. Mr. A. tells us that the new mongrel size will exactly take 8 standard one-pound sections. In reply to this, which has no bearing upon the question under discussion, I will say that the Langstroth brood frame does not take sections at all. A broad frame can be perfectly fitted to the true standard, and the 4¼ sections at the same time by just making the end pieces a trifle thinner. Further, that this style of adjusting sections is now doomed, and is rapidly being superseded by much better methods.

4. This simply proves that editors can be mistaken; and further, Mr. Langstroth can no more change the standard frame than any one else; when he changes the dimensions, he simply gives us another frame; this second frame might become the standard, but it *has not* as yet. There is this one thing in our favor; wherever we find the true standard, we find the measurements accurate. Of this mongrel, we find a great variation in depth, as well as length. The "large manufacturers" seem to get in too great a hurry to keep their machinery from varying, often times more than the difference over which we are discussing. If Mr. L. had made a *few* frames 17⅜ and then abandoned them for 17⅝, and *booked* this latter size, then I should say Mr. A. was right, but I find that he, after much figuring and experimenting, settled upon, and gave publicly to the world, the 17⅜; and until he notifies us in the same manner that 17⅜ is not the standard, we shall insist on it, that it is the standard Langstroth frame.

Mr. L. may now "prefer" the 17⅝, but to entertain any such preference is scarcely based upon any laws in nature, but rather favoring some ones convenience in the matter; is it not? As regards the two lengths, we cannot believe that any one would realize any difference in them, except where fixtures were to be exchanged from one hive to the other, and in this case, many of us have done it successfully.

Dowagiac, Mich.

[The inventor of the frame, and author of the book, Mr. Langstroth, has publicly given his sanction to the frame 17⅝ inches long. No amount of discussion will be able to change the thousands of both sizes now in use, and we fear none of the manufacturers will be willing to change unless an agreement can be entered into to make a new standard frame for America. This, in many ways, would be desirable if all would conform to it.—ED.]

For the American Bee Journal.

Central Illinois Convention.

In answer to a call for a meeting of bee-keepers of the association of Central Illinois, 22 members assembled at the Surveyor's office in Burlington, Iowa, April 11, 1883.

The forenoon session, which was a short one, consisted in the reading of the minutes of the previous meeting, the report of financial standing of the association, and giving some experiences in working with bees.

In the afternoon session the subject of "hives and sections" was taken up, and President Wolcott thought more depended on proper management than the kind of hive, for success.

Mr. Cox believed if we had a standard hive it would be much better, but did not expect such a hive would, very soon, become universal.

Mr. Butler asked what kind of frame was best to winter on?

Mr. Cox: A deep frame.

Mr. Corbett thought bees worked better in surplus frames at the sides.

Mr. Butler used the Langstroth hive, with frames running crosswise, and was decidedly in favor of the chaff hive for wintering, and the 4¼x4½ section for surplus.

Jas. Poindexter considered large

frames better for finding the queen or manipulation, as a less number are required in a hive, and it did not take as much time, as if the frames were smaller and more of them.

Mr. J. Kuran thought short frames more easily manipulated; he liked single-walled hives better than chaff hives; they were more easily handled.

Mr. Smoot preferred the American hive with the cap to slide down over the lower hive, in winter. He was very successful in wintering, but gave no upward ventilation.

Mr. Funk used the chaff hive for winter, and let the snow remain around the hive until it began to thaw; then remove it to keep the hive dry.

The next subject was "swarming," and Mr. Hayes made artificial swarms by taking three frames of brood and bees from the old colonies as often as they could be spared, and in this way, last season, increased from 2 to 13 colonies.

The next subject was "bee pasturage," and Mr. Wolcott thought there was a marked difference in bees kept in the city and those in the country.

Mr. Cox thought that, in good seasons, if the honey was taken away as fast as collected, there would be but little difference.

Mr. Funk was asked if he noticed whether his bees gathered any honey during the first part of last August. He said there were but few days that his bees did not get some honey, and that was during stormy weather.

"Different races of bees" was next discussed.

Mr. Kuran: Holy Land bees were very prolific, but no better honey-gatherers than Italians; he could tell the Holy Land bees by their peculiar motions; they were worse about robbing. Black bees were bothered more by the moth.

Mr. Funk said the Holy Lands were very sensitive, and took some time, after being handled, to become quiet. They did not properly seal their honey.

The next subject was "queen-rearing," and Mr. Kuran had not noticed any difference between artificial and natural queens.

Question by the President.—"Are imported queens any better than those homebred? Answer by Mr. Kuran: He could not see that they were better in any respect.

The next subject was "marketing honey." Mr. Cox said he could get twice as much extracted as comb honey, and, with him, it was the most profitable. He sold extracted clover honey at 10 cents, and fall honey at 9 cents per pound. He thought it best to cultivate a home market, by retailing at wholesale price.

Mr. Wolcott said if people were acquainted with the real value of honey all that could be produced would easily be disposed of. Adjourned.

JAS. POINDEXTER, *Sec.*

☞ The Central Kansas Bee-Keepers' Association will meet at Manhattan, Kansas, on June 30, 1883.

THOS. BASSLER, *Sec.*

For the American Bee Journal.

Clipping Queens' Wings.

DR. G. L. TINKER.

A few bee-keepers, including Mr. G. W. Demaree, think that the clipping of queens' wings is liable to injure the wing-power of worker bees. As this is a question of much importance to all bee-keepers, it should have thoughtful consideration. For myself, I should dislike greatly to have my queens go unclipped. But if it could be shown that there is danger from the practice, it would be discontinued.

The fact that a colony in a very large hive, in some instances, never swarm, is evidence that some queens do not again take flight after the time of mating. It is exceedingly rare, if it ever occurs, for a fertile queen to leave the hive except with a swarm. Hence, in a non-swarming hive, the queens' wings could be of no use to her after fecundation, and it would not matter whether her wings were clipped or not. Probably, Mr. Demaree, nor any one else, would venture to assume that because the laying queens of non-swarming hives rarely or never take flight, that eventually the worker bees would, in consequence, suffer a loss of wing-power.

As the clipping of queens' wings is never practiced except upon the fecundated queen, it seems to me that there is nothing analogous about it to the domestication of fowls, which, from ages of confinement, has resulted in a loss of their wing-power. If, however, a plan of artificial fertilization could be devised by which the mating of queens could take place without having to take flight, then we would have, no doubt, an analogous case to the domestication of the common fowl, and, after many years of such practice, we might have worker bees going "on their bellies" after nectar.

The question therefore arises: Is not the fact that the virgin queen is rarely, if ever, mated except upon the wing, a wise provision of the creator against the possible loss of the wing-power of the worker bees, either through natural processes, or the hand of man in securing artificial fertilization?

I take it that Mr. Demaree's suggestions are applicable, not to the clipping of the wings of fecundated queens, but to the proposed and attempted practice of artificial fertilization, which would necessitate more or less of confinement of virgin queens. In view of the possible dangers indicated by Mr. D., may we not be thankful that it has never been accomplished in a practical manner, and hope that it never will be.

But the proper clipping of the wings of laying queens cannot, in my estimation, be considered in any sense injurious, and I shall continue the practice for the many well-known reasons that have been given.

HIVING SWARMS.

After the swarm is out and the queen found and caged, the old hive is moved back and covered with a sheet, the new hive to be set in its place with the caged queen near the entrance. To prevent the returning swarm from going into the adjoining hives, I take off the covers and set up in front of them, or sheets may be thrown over them. After the bees get well started into the new hive the queen is liberated. The swarm is readily hived, and when set upon a new stand, will work just as well as if a great din had been made upon the dinner-horn and a lot of tin pans, before clustering in some tree-top to be hived in the ordinary manner. By the way, there is less danger of a swarm going to the woods at once where the queens' wing is not clipped, than of its bidding good-bye to the new hive and the bee-keeper a few hours after hiving. By having the queens' wing clipped, this annoying dilemma is avoided.

HOW TO CLIP THE QUEEN'S WING.

The comb on which the queen is found, is lifted out and hung on a revolving stand for the purpose, or it may be leaned against a hive. With the thumb and finger of the right hand, lift gently the queen off from the comb by the wings—not one wing. With the thumb and finger of the left hand, take hold gently of the queen by the thorax, or middle part of her body. Do not let go of the wings until she is held firmly, but very carefully, in the left hand. Then with the right hand take a pair of sharp-pointed scissors and steady the lower blade upon the second or third finger of the left hand. About one-half, or nearly one-half, of the *thin edge* of only one of the large wings is cut lengthwise, or nearly so, of the wing. By this means the deformity can be hardly noticed, which is a matter of some moment to me, since I believe it to be cruel to cut more than is necessary, and injurious to cut the wing squarely off. By the method here given the queen goes about her duties as if nothing had happened, and I have yet to see that it is in any way detrimental.

With bee-keepers having large or stiffened fingers or who are very nervous, it might not be safe to handle queens in the manner here given. In such case, the lady of the house could perform the operation as dexterously as any one.

New Philadelphia, O.

For the American Bee Journal.

The "Strained" Bees.

W. H. SHIRLEY.

After reading Dr. E. B. Southwick's remedy for the small section craze, on page 256 (May number of *Gleanings*), I commenced to take his remedy, and it has made me feel so much better that I have sent to the Doctor for a prescription for "the strained bees."

We take the Doctor to be a homeopathic physician, and if we understand rightly, their way is to test the strength of all medicines on themselves before giving to their patients.

That is why we put so much faith in the Doctor.

I believe Mr. Heddon was the first to cross dark leather-colored Italians with brown German bees. From this cross sprung the famous red-clover strain.

From Mr. Otman's report, backed up by sales of honey, we should say white-clover strain for Mr. O.

B. F. Carrol, of Texas, must have a new strain; and now Henry Alley, of Wenham, Mass., is out with a winter strain—needing but little honey to winter them. Next, some one will have a strain that lives all the winter without eating *any* honey. Followed by another strain that gathers from 100 to 200 pounds of nice white honey where our common bees would starve.

Believing in the old adage, "An ounce of prevention is worth a pound of cure," we sent to the worthy Doctor of Mendon to be prepared for the "coming" *Apis-Americana*. Could we have had the next to the last named strain of bees, during the past winter, we should have been 20 colonies better off, as our fancy strain were perfect gormandizers, and the 20 colonies died for want of food.

Now, we are longing for the last-named strain; particularly the honey part. As the truth must be told, (I have just taken another dose of the Doctor's medicine), our golden strain only gathered 20 pounds of surplus, per colony, spring count, last year. Not much of the ring of gold about that, except the ring of truth!

But, if the Doctor's prescription, sent for, does not make us sick, followed by too big a honey shower, we hope to speak better of our dark ringsters; for they are stronger in numbers, at this time of year, than we have ever seen them before.

And, Mr. Editor, if we make a report of a large honey crop, we will back it up by showing bills of sales.

Last winter I wintered my bees on something of a new plan (to me at least), and as I never saw it in print (although it may have been there a dozen times, as I have not time to read one-half that is written), perhaps I will try my pen at a description, when in season, and safe from being called a winter crank.

Glenwood, Mich., May 17, 1883.

For the American Bee Journal.

Northern Ohio Convention.

The Northern Ohio bee-keepers held their spring meeting at Norwalk, O., May 2, 1883. The president not being present at the hour appointed for opening the meeting, Allen Bartow, of Milan, O., was chosen temporary chairman. The secretary's report of the last meeting was read and approved. The treasurer's report showing a balance in the treasury of $10.45.

C. D. Bennett, of Elyria, O., B. P. Whitney, of Kipton, O., and Peter Biermacher, of Avon, O., joined the Society, which now numbers 43 members. After the enrollment of new members, the president having arrived, took the chair and called for the reading of the first essay, which had been assigned to Allen Bartow, of Milan, as follows:

PRODUCING SURPLUS COMB HONEY.

Having been assigned the task of writing an essay on the subject of comb honey, or how to obtain the largest crop of the same, I shall state that we must have the largest crop of working bees in each hive to obtain it; now, how shall we obtain the bees?

If we commence in the spring with good, healthy bees, either blacks or Italians (for I ignore all others), we must first learn their exact condition as to strength and numbers, then use good judgment in building them up to full strength or capacity of hive (movable frame of course), and by manipulation hold them up to this; now comes the all important question. how shall we do this? Each bee-keeper must decide for him or herself; but I suppose I am expected to give some plan, and shall do so to the best of my knowledge of the subject, which is the following:

Treat your bees as you do your other farm stock, encourage breeding by giving them warm quarters and plenty of food; it is not enough that there is plenty of honey in the hive, any more than it is enough that your cow has plenty of hay or straw—spring having arrived, both bee and cow require a change of food, if they are to successfully bring forth and rear their young, and give you a profitable surplus; then I would say, stimulate your bees in every possible way to breed and rear bees for the time maples are in bloom until fruit goes out of bloom, and white clover comes sufficient to give full flow of honey.

Now, how is this to be done? If the colony is light, reduce the size of brood-chambers (by means of division boards or otherwise), to the number of combs upon which the bees cluster, removing the other combs beyond or behind the division-board, leaving room underneath the division-board for the bees to pass and get the honey from them, not forgetting to narrow the entrance to the hive to prevent robbing; now prepare feed of thin syrup of granulated sugar, or sugar and honey, and feed it on warm evenings in front of the hive at sundown, in a feeder that prevents drowning of bees, and remove your feeder in the morning, replacing entrance block to narrow the entrance, and prevent robbing. The feeder should be made to fit the entrance, while feeding the colony. Now, when combs become crowded with bees, move back the division-board and make room in centre of cluster for another empty comb, put it in, and when again crowded, repeat as before until the hive is crowded with bees with full combs and board removed. In a day or two prepare for surplus, in this way: Remove from the hive a frame of comb filled with honey ready to cap, and put it at side of surplus box, putting next to it a frame of sections filled with foundation, put in division-board next to surplus frame and cover down the brood-chamber. As soon as bees get crowded, and are working in sections, add more surplus frames until your surplus chamber is full of frames, then as each frame is filled with honey remove it and put in its place empty frames of sections. Look to your brood-chamber, removing all queen-cells, and keeping your queen supplied with empty comb in which to lay. If you lose your queen, replace by introduction a fertile one at once.

In conclusion I would say, that the treatment would be proper in case the colony is a strong one.

Milan, O.

The president said place a comb filled with liquid food between two combs filled with brood, and it would stimulate brood-rearing better than any other method he had ever tried. Must be careful not to spread brood combs too often. The brood might become chilled.

Mr. Smith said he used a mixture of granulated sugar and buckwheat flour for stimulating, with good success.

Mr. Johnson said, he fed in a feeder placed on the top of brood combs with cushion placed over it.

Mr. Whitney said, he had a colony in his cellar which he found floating in 18 inches of water during the winter, which was now in good condition.

Mr. Boardman said, he would not spread brood combs at this season of the year, as bees now are reduced to their smallest numbers, and there is great danger of brood being chilled.

Mr. Whitney asked if spring feeding had proved successful when practiced during cold weather.

Mr. Fish said, he would not feed during cold weather if bees had an abundance of stores. He would feed those only that were destitute.

Mr. Bartow said, he would reduce the space occupied by each colony to such size by the use of the division-board, as would enable the bees to cover all the combs all the combs, and thus the requisite amount of heat could be kept up.

The next essay was by H. R. Boardman, as follows:

THE MOST PROFITABLE RACE OF BEES.

One of the most prominent objects of my early boyhood recollections, is the old box bee-hive out in the garden, under an old apple tree, with its inhabitant. the black bee. By the hour have I laid on the grass under this old apple tree, and watched with eager interest, those mysterious little workers.

Many wonderful things had I been told about them, and the economy and government of the multitudes within their well-guarded home; which, to me, was shrouded in the deepest mystery, and their well-kept secrets, guarded with a dignity and honesty which I had never presumed to question. I had been told that they had a form of government like a nation of people, and had a king who sat upon a throne, and all his subjects paid implicit obedience to his commands and rendered the utmost respect to his sovereign wish, and I had noticed upon all combs, that had been removed from the hive, undoubted proof of this. The throne upon which the king sat. I have since learned. were old queen-cells. I had been told that these communites were systematically divided, and that each division had its particular work to perform, and leaders or overseers were placed over them to superintend the work in each department; and some were assigned the position of guards at the entrance of the hive, and did not have to gather honey.

I watched them swarm with more than idle curiosity, and I heard older people say that when the swarm issued they followed the king out, and wherever he went they followed—and if the king died in a colony, they would all stop work and would never do anything more, and would finally all die. I watched them toil the summer through to accumulate their sweet stores of food to provide for the coming winter, only to be robbed of them and cruelly murdered in the fumes of the foul brimstone pit. I said it was cruel and wrong, and that there ought to be some other way, and if their stores must be procured in that piratical way, although honey to me was a tempting luxury, I preferred for one to forego the pleasure of such luxury.

How did any one learn these wondeful things, I said, unless by patient and careful watching, and if others had discovered these wonderful things, why not I, by patient observation, penetrate the mysterious precincts of these wonderful little insect people? And I did watch with all the energy awakening curiosity could arouse, and I listened often with my ear close to the hive, to their mysterious bee talk; but their secrets remain untold, and their every movement remained a dark, unsolved enigma.

But a new era came, light dawned. There came the movable frame and the new bee, the yellow bee, with its wonderful reputation for penetrating the depths of the rich red clover. And what then? Then came a knowledge of those mysterious things within the hive; improvement and progress in bee-culture; old superstitions vanished, new and startling truths were brought out, until that mysterious hive of 20 years ago is to-day a thing of practical fact, within the comprehension of the veriest novice. Italian queens were introduced into our colonies of black bees, and in an incredible short time the whole colony was changed from black to yellow bees, discovering the startling fact to even old bee-keepers, of the brief, almost ephemeral existence of the honey-bee during summer.

So readily was this change made, and so apparent the benefits gained thereby, that Italian queens were rapidly imported, queen breeders sprung up over the land everywhere, and the queen has become a common article of trade in the market of bee-keepers' supplies, and the superiority of the yellow race of bees over the black, became almost universally acknowledged. But a mountain of difficulty arose in the pathway of queen venders, especially importers. A standard of purity was necessary to preserve the reputation of the imported stock, and distinguish it from the plebeian race, but in attempting to establish this, it became apparent that even the imported stock would not stand any single test, so various were their markings and characteristics. Suspicions were awakened among unprejudiced bee-keepers that the race of bees from which we were receiving importations, were not a pure race, and this suspicion has been strengthened into fact, by the knowledge that black bees are found in Italy. As a result of these variations, different strains of bees began to be brought to notice, each possessing particular, valuable qualities as set forth by their particular champions; and many a sharp contest has been carried on in the bee papers, by the advocates of some particular stripe, or tint, or tinge in his favorite strain, and now we have almost as many strains of bees as there are breeders.

Who that has read the bee literature has not a vivid recollection of the sharp criticisms upon the dark queen, sent out by Messrs. Dodant; even unkind reflections upon their integrity. They have outlived it all, and float successfully now above suspicion.

Some breeders take pride in publishing what they no longer hesitate themselves in believing—that they are breeding a cross of the black and yellow race, and no longer consider yellow bands a test of excellence, or a guarantee of purity, and that although beauty and amiability may be desired, they are too often obtained unwisely, at a sacrifice of more sterling qualities.

The reports of large yields of honey coming from colonies not possessing the requisite number of yellow bands to entitle them to a certificate of royalty, has become too frequent to be accidental, and the wise apiarist will hesitate long before superseding the queens of such colonies with those having the regulation markings.

We are, without doubt, largely indebted to the introduction of the yellow race of bees into this country, for the knowledge and improvements in modern bee-culture.

But while Mr. A., and B., and C. have made a paying business rearing queens, and have made a hobby of yellow bands and golden tints, we, as practical bee-keepers, are looking to a different source for our revenue, and are only anxious how we may obtain large yields of honey. Beauty and pleasure are secondary considerations. Honey gathered by the black or hybrid bees, brings as much money in the market as that obtained by the most beautiful golden Italians—and in fact, it is claimed that honey comb made by the black bees is whiter and more delicate in appearance than that made by the yellow race.

But what shall we say of the new races more recently introduced into this country by Mr. D. A. Jones, of Canada, at such great expense both in time and money? The Cyprians and the Holy Land bees, what can we say of them? except that they are an experiment, and like all experiments in bee-culture, should be tried with much caution. There is an old maxim, "Let well enough alone," not altogether a noble one, yet for all that, successful for the moderately ambitious, and perhaps a very safe one for the average bee-keeper. We can but admire the enthusiasm of Mr. Jones, which has prompted him to such untiring energy, and to make such sacrifice of time and money in his search for some superior race of bees, by which he might benefit mankind. And Mr. Frank Benton, too, his assistant, has done much to command our esteem and admiration.

But all great enterprises of this character are measured by their ultimate success or failure. The reports that have already been received from his importations, seem to promise but little or any improvement upon the yellow races of bees already so universally diffused over this country, of which I prefer to consider them only a strain—and, indeed, the Cyprians have already gained a reputation of being very un-amiable in disposition; and often becoming angry without provocation.

By what name, then, shall we know the coming bee? We might adopt the phrase used by Mr. Heddon, and applied not to bees, but to bee-keepers, "Get there success," as it is very comprehensive of the qualities we think essential, but we prefer that other, more beautiful and more significant name, already heralded forth among progressive bee-keepers: *Apis-Americana.*

Townsend, O.

C. E. Newman asked if Cyprians or Holy Land bees had proven more profitable than the Italians.

Mr. Boardman said, he thought the Italians were the most profitable.

S. F. Newman said, he had tried both Cyprians and Italians, and in his experience the Italians had proved to be fully equal to the Cyprians as honey gathers, and were not as irritable. At times it was almost impossible to handle the Cyprians unless they were chloroformed.

Mr. Bartow said, he preferred hybrids to Italians; they protected their stores better than other bees.

Mr. Bartow asked whether Holy Land bees were more likely to be pure than the Italians.

Mr. Boardman said, he thought the Holy Lands as likely not to be pure as the Italians.

The President:—We are ignorant as to the fact whether the Cyprians are indigenous to the island of Cyprus, or whether they were Italians modified to a certain extent by climate and other causes. The important question to be decided is, which race of bees will give us the largest amount of honey, and thereby fill our pockets with money. He wanted no pure bees, but preferred hybrids.

Mr. Whitney asked Boardman which produced the best workers, an Italian queen mated with a black drone, or a black queen with an Italian drone.

Mr. Boardman: did not know which would produce the best results. The facts are that Italian queens generally mate with black drones.

Mr. White: an Italian queen mating with a black drone produces better workers than the reverse.

The next essay was by D. White, as follows:

PRODUCTION, CARE AND SALE OF EXTRACTED HONEY.

I received a notice from Mr. Newman, a few days since, saying we shall depend upon you for that part of the programme, namely: "The Production, care and sale of extracted honey." I believe this subject should be discussed freely, and, no doubt, some one else could have been selected that could come nearer doing justice to the subject than myself.

For the past three years it has been my hobby to procure almost entirely extracted honey. The first season I took all my honey from brood-chamber. Second season, from brood-chamber, and some from surplus chamber. At the commencement of the season, or when I commenced extracting, would take all I could get from each colony, but after that commenced, being careful by taking about half each, so on until the last work was to take only one side comb from each colony; this I would keep up as long as they were able to fill the empty comb. This was my plan of working safe, and in case the honey flow should shut off (as it frequently does without any warning), I would have plenty of honey left for winter purposes.

I fancy a great many who have used an extractor, have done so without using any judgment. Hence, their bees were compelled to go into winter quarters with nothing but late unsealed stores, and the consequences were heavy losses during the winter. The honey procured during the two seasons mentioned, was about 75 pounds to the colony, on an average, each season. I was obliged to work very hard, and compelled to visit a hive too often; but had no notion of going back to comb honey. I use chaff hives that take Langstroth frames, 10 frames below and 13 above, and, last spring, I was ready with enough wired frames filled with foundation to fill the surplus chambers to 80 hives.

We must take into consideration the amount of comb work that had to be done; about 1,000 sheets of foundation was worked into comb. My extracting, last season, was entirely from above, and I procured enough honey so that I sold 8,000 pounds with enough left to winter—and 1,000 pounds held in the combs to use this spring, if needed—I call this a reserve, and expect hereafter to have plenty of honey in the same shape every spring. The bees gathered it, and if they fail to need it to carry them until the honey comes again, they will certainly have enough, so that the first day's work they do will be done for me. I weighed what I extracted from one of my strongest working colonies and it gave me 213 pounds, and I think I had several that did equally as well.

My theory, to procure plenty of extracted honey, is first, strong colonies; second, plenty of room for the bees to work, and the next thing is for the bee-keeper to roll up his sleeves and work too. It is no place to put a man that does not like to work. I was entirely alone with my 80 colonies last season, and I worked hard enough so that only 3 colonies cast natural swarms.

I do not tell this, wanting you to think that I like to work so dreadful well—for I do not—but, last season, I was forced. I think I am safe when I say I could have procured at least 1,000 pounds more honey than I did, had I had good help; that is, I lacked that much of working the bees for all there was in them. This loss came from not getting around to extract the second and third times as soon as I should, by from three to four days, which makes a great loss, when behind that way on a large apiary.

I believe we all want to make this business as remunerative as possible. I read and hear a great many splendid reports from men that produce entirely comb honey; am glad to know that such is the case. I believe it our duty to supply the demand for both comb and extracted honey. It would be too much like all belonging to one church for us all to procure one kind of honey.

We that procure extracted honey must get about double the weight that our brother bee-keepers do that procure comb honey. If we fail to do this, they will get more money than we do. Then another thing we must make up our mind to do; we must work harder than they do, for while we are working early and late, carrying heavy combs and wielding and uncapping knife, they are doing what I call puttering around, hiveing now and then a swarm, and the rest of the time waiting for section boxes to be filled and completed. We do not want to make them feel bad, and do not think we shall, but I believe we have got a large per cent. the advantage over them in a short honey flow, and I believe it the characteristic of this section of the country to usually give us short seasons.

Now, suppose we have plenty of nice straight combs in wired frames (and they must be wired for we do not want the combs tumbling out and smashing to pieces), and we have filled our surplus room, ready for the first honey to be found in white clover—all our bees have to do the entire season is to gather honey and deposit it in our empty combs—then I believe bees will work stronger on large combs than on small combs in section boxes. It must be an extremely short season if we cannot extract, at least on an average, 75 pounds to the colony of good, ripe honey—13 combs once filled will more than do this. Now, how would it be with 80 pound sections in one of these hives; a few completed out of the number ready for market, and the rest all the way from not being touched at all to half and two-thirds completed, and a lot of unsalable nubs, I call them? This is in a short honey flow, understand, and season shut off, leaving everything as I have tried to explain it.

I may be wrong, but we are here to learn, if possible, from each other, and if we can tread on the toes of our brother bee-keepers that procure comb honey, it may be the means of fetching out something that will be a benefit and do us all good. I believe there are too many men that keep bees that think they know it all. Any how, it seems to be my lot to run across such men; especially men that have always kept bees and will not try to learn what they call new-fangled things. You will see these men with a rag rolled up for a smoker and drumming a tin pan when a swarm is out. I mention this, for I believe we are never too old to learn. When I first commenced with bees I learned to play quite well on a tin pan, cut off virgin queens' wings. and several things that I do not do now.

Care of extracted honey occupies but little of my time. I have tin cans, capacity about 500 pounds, with large gate to draw out the honey. I tie over cans securely, cheese capping cloth, letting it bag enough to hold a large pail full; and when that much comes from extractor, I carry it into a dry honey house and empty into cheese cloth to strain, while I am filling the next pail of honey. I believe it a good plan to store in 10, 15 and 25 pound cases ready for market. Extracted honey will candy in from 4 to 6 weeks after extracting, and I believe it will not be very long before it will sell best in a candied state, especially when people learn that candying is a positive proof that it is pure unadulterated honey. We know of no other liquid sweet that will candy. Candied honey can be put back to a liquid state by warming gradually, as often as desired, without injuring the flavor, but must not come to a boiling point.

The sale of extracted honey seems to be the great trouble with some, but I believe it can be more readily sold than comb honey, and in very much larger quantities, for the following reasons: It is sold for about half the price of comb honey, and comes within the reach of every family. But the most important thing of all is, never to sell a poor article. Never extract a comb unless it is sealed as nice as any section-box honey. It takes elbow grease, and will give most anybody the backache. But we must come to it, if we expect to build up a trade on extracted honey.

It is very easy work to empty combs of thin, unsealed honey, and not a very hard task to extract when only half of the combs have to be gone over with an uncapping knife; but my opinion is to not sell such honey. I do not believe any one can build up an extensive trade with such stuff, and know he cannot if he comes up in my territory. I have built up a good trade, and have done so with a first-class article.

About 4,000 pounds were taken from my door, last season, by customers that came with pails, cans, crocks and jugs to carry it in, and they kept coming long after my honey was all gone. I had a wagon on the road peddling about one week, and could dispose of about 300 pounds a day in this way. Go where you will, you will find more or less people down on strained honey, as they call it; but my plan from the start was to give such people a saucer of honey if I could not persuade them to buy, and in nearly every instance it has made me a steady customer; some that were so prejudice on the start, now buy, each season, from 50 to 100 pounds. I have a host of customers that work by days' work for a livelihood. They can afford it, and will buy at 11 cents a pound, while but few of this class will look at comb honey at from 18 to 22 cents per pound. I think I gave this a fair test last fall, with all classes, when peddling. I had comb honey in section boxes, letting any one take their choice, 11 cents for extracted and 18 cents for comb, and I had a few sections left out of 100 pounds while I was disposing of about 1,800 of extracted.

There would not have been as much difference as this had I not put more force on the extracted, telling them all the difference there was, the extracted was out of the comb. I told them facts, and after tasting and examining for themselves they would conclude to take all or part extracted. I have a great many customers that want a little comb honey each season. They want it for special occasions. One steady customer of this kind is my wife, and I am ready to agree, when we take looks into consideration, we must fetch out the comb honey.

I will close by saying we can keep a strong colony of bees under control, scarcely one will cast a swarm if attended to in the proper time, that is, combs taken out and extracted as fast as they are sealed and ready, and if increase is wanted it can be done after the honey flow, and to make it safe, save plenty of good sealed stores to give the colonies we build up. I, last season, increased from 80 to 120. In my home apiary, I now have 100 rousing colonies, did not lose one, and not a weak one at the present time. I lost 4 out of 20 two and one-half miles from home. Cause, not properly cared for. I did not fix them for winter as I should. I used the old-fashioned way too much—guessed at it. Guess work will not do in the bee business, any more than any other.

New London, O.

Mr. Bartow: How many times do you extract from the same colony during one season?

Answer: As many times as two or more combs in the upper story are perfectly sealed.

Mr. Whitney: How do you prevent the queen from laying in the upper story?

Answer: I do not prevent it, and it is not necessary, as it does no harm.

The comparative profit of producing comb and extracted honey was thoroughly discussed by nearly all the members present, without arriving at any definite conclusion.

The Berlin Fruit Box Company had on exhibition some very fine one-piece sections, and Newman Bros., of Norwalk, some Quinby smokers.

James Gibbs, the treasurer, having resigned, Edwin Gibbs was chosen to fill his place, and Miss Eliza Moon of Milan, was chosen vice-president.

After a vote of thanks to Norwalk City Council, the convention adjourned to meet at the call of the secretary, sometime during the month of October, 1883.

S. F. NEWMAN, *Sec.*

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Queries About Extracting Honey.

Will Mr. Heddon please answer the following questions:

1. Will it do to extract honey the next day after it has been deposited in the cells by the bees?
2. Are one-story hives as good for the production of extracted honey as two-story hives?
3. How many 12x12 inch frames should there be in hives, when only of one-story?
4. How can we ripen the honey after extracting, to make it keep well?
5. Is there any way to ascertain a good day for honey-gathering, by the indications in the morning?

Nineveh, Ind. W. D. SMYSER.

ANSWERS.—1. Not if the honey is intended for sauce. If for manufacturing purposes, it will, if the nectar is of good quality.

2. Not for my use. I have tried both thoroughly, and much prefer the 2-story system. Some experienced and successful producers differ with me, but I must answer from my own experience.

3. I should want as many as 25 at least.

4. I have tried all plans, except sun evaporation, and I find no method equal to the old-fashion one of letting the bees ripen and cap it, when it will be rich and oily, and not nearly as liable to grain or sour. The best methods I have used, is to store the honey in one-gallon crocks of stoneware, and pile them up, with sticks between them, and keep in a dry room, with screened windows and a free circulation of air. All double-walled or cool rooms will be damp.

5. Electricity, that great mover of all that stirs, that other name for heat, light and motion, is the honey producer's friend; when the morning indicates a day of electric conditions. I look for a good secretion of honey.

The Lye Process.

Mr. Heddon, in some of the back numbers of the BEE JOURNAL, you speak of the lye process for making the sheets of comb foundation, let go of the press, etc. Do you still use it? How do you prepare the lye? Do you rinse the sheets afterwards?

V. W. KENNEY.

Shirland, Ill., May 22, 1883.

ANSWER.—Of all that slips and slides, lye is the "slickest." Get the best concentrated lye—poor stuff is no go. Louis Menzes Co. is the only good kind we can get out of many brands. Put 2 tablespoonfuls into a quart of water. With a brush made of a handful of broom corn, wound with stovepipe wire, lye the book thoroughly. Now don't be afraid of the effects of the lye on the book. It will not injure it nor the foundation. Drop a piece of foundation in this strong lye solution; leave it there a week, and notice that it does not effect it at all. The lye solution, when on the foundation in large quantities, precipitates and losses its strength, so that the white powder it leaves can be tasted on the tongue, and only a brackish taste is perceptible. To put to the bees it is perfectly harmless. We use a cheap brush because the lye eats up a brush in three or four hours. The dies must be cleaned of the particles from the eaten brush, every two or three hours. To keep the fingers from being eaten through the skin, dip them every few moments in strong vinegar. Do not get any vinegar (not a drop) on to the dies. You will omit to dip your fingers into the vinegar often enough, at first, but you will soon have a gentle reminder, in the shape of a sore, that will sting like a bee when lye touches it. With some die books, and on certain days, we run off 100 sheets with once using the lye on the book; but, at other times, only two or four sheets without having to touch the book in places with the saturated brush. The above is the general outline.

Convention Notices.

Convention in South-Western Iowa.

All who are willing to help support a convention in the South-Western counties of Iowa, will please drop me a postal card. Who will be first?

T. A. HOUGAS.

Henderson, Iowa, May 21, 1883.

☞ The Warren County, Kentucky, Bee-Keepers' Association, meets at Smith's Grove, Ky., on June 2. A large attendance is expected.

N. P. ALLEN, *Sec.*

* * *

☞ Renewals may be made at any time; but all papers are stopped at the expiration of the time paid for, unless requested to be continued.

SELECTIONS FROM OUR LETTER BOX

Bees Gathering Honey.

Bees are doing well—taking in honey fast from black locust; white and red clovers are coming into bloom. I have 63 colonies.

WM. HAMILTON.

Louisville, Ky., May 17, 1883.

Bees Building New Comb.

My bees built some new comb in the small sections from apple tree bloom, but did not complete any. My colonies are now very strong, and have mostly nine full frames of brood. There will be a great amount of swarming in this section, this year.

DR. G. L. TINKER.

New Philadelphia, O., May 21, 1883.

What Became of His Bees?

Neighbor A. had two colonies of bees last fall; this spring one was dead, the other good and strong. He cleaned out the hive in which were the living bees, and while doing so set the frames (and bees) in the hive that had contained the dead bees. After having nicely cleaned up, he thought the bees might as well stay where they were and save the trouble of replacing them in their own hive. So he placed them on their own stand and took their own hive away. After a few days he opened the hive, when, lo! not a hundred bees were found. Now, he is anxiously inquiring of his neighbors, who are amateur bee-keepers, "What became of my bees? Can you tell?"

J. B. CRAIG.

Beatrice, Neb., May 21, 1883.

[It is a case of abnormal swarming. The hive was distasteful to the bees, and they "left for parts unknown." Perhaps it was quite dirty, much bespattered by the diseased bees that finally died in it, and the bees placed there against their will, concluded to "take to the woods," rather than remain in a hive that was too highly perfumed for their comfort.—ED.]

Bees in Good Condition.

I have 36 colonies of bees now, in good condition; I lost 8 in the winter; 5 of them by neglect, on account of being away from home.

E. S. HOVEY.

Swanton, Iowa, May 17, 1883.

A Cold Wave in Kentucky.

Notwithstanding the weather here has been very changeable, the season so far has not been altogether unfavorable. My bees have built up rapidly, and have done well on fruit bloom, dandelion, etc. Locust opened on the 13th inst., and gave a deluge of nectar till cut short off by the cold wave of the 21st. We had a skift of snow (a sight never before witnessed here at this season of the year), on the night of the 21st. The bees were housed for 3 days. White clover is wasting. I have been feeding a swarm that issued just before the present cold, rainy, gloomy spell. The prospects look better to-day (23d). I notice that the three dismal, cold, rainy days just past, have afflicted some of my nursing nuclei with dysentery. The weather has been unfavorable to queen rearing—too changeable.

G. W. DEMAREE.

Christianburg, Ky., May 23, 1883.

Phacelia for Honey.

I send you a bee plant for name. It is an early bloomer, and the bees swarm on it. The plant is a native of this country.

E. E. EWING.

Highlands, N. C., May 8, 1883.

[This is *Phacelia pusilla*, a plant with no other common name than that of the genus or first part of the scientific name here given. It is a peculiarly Southern species, though the genus is well represented throughout the United States, and are all important honey producers. Most of the members of the family (Waterleaf Family), grow in shady places, but this and a few others thrive in the open sunshine on prairies, etc. They often clothe the banks of railroads, etc., on particular soils, and this, no doubt, might give a hint as to their cultivation, should this be desirable. The flowers are almost wholly dependent on honey-loving insects—especially bees—for fertilization, as the stamens and pistils of the same flower mature at a different time. The attractions for the bees are, however, such, that there is little loss in seed production on this account; the pollen is abundant, and the nectar copious and easy of access.—T. J. BURRILL. Champaign, Ill.]

Cold, Cold, Cold.

We have not had 5 days so far this year, warm enough to open the bee hives without danger of chilling the brood, of which there is but little. It freezes nearly every night. On the morning of the 14th, ice was found ¼ inch thick. Bees are getting poor in numbers and short of stores.

G. M. DOOLITTLE.

Borodino, N. Y., May 17, 1883.

The Spring in Texas.

The spring thus far in Texas has been cold and backward. We are three or four weeks later than usual. Our spring crop of honey will be short. On the prairies, the bees, as yet, have gathered but little honey. I have moved my bees from Shreveport, to Arlington, west of Dallas, to take advantage of the horsemint. This is the great honey-producing plant of Texas. My bees wintered well, as they always do when they have plenty of honey. Without an unusual summer, and fall, we will not have so good a honey season as the last. Our State Bee-Keepers' Convention met at McKinney, on the 16th of April; we had a good turnout, and considerable enthusiasm. The business of bee-culture is largely on the increase in Texas, and bids fair to be, in a short time, one of our largest industries. We, of the South, hope that the bee papers will have nothing more about wintering bees in them, this year. This is a subject that does not interest us; in fact, we do not read the articles on that subject. We would like, at least for the summer, to have the periodicals filled up with matter relating to the general interest of bee-culture. I am glad you, Mr. Editor, are disposed to exclude personal matter, and personal crimination from the BEE JOURNAL.

W. R. MARSHALL.

Marshall, Texas, May 18, 1883.

Still Snowing.

Byron said, "The moon is up, and yet it isn't night." We can say, "It snows yet, but still it is not winter." Bees were never so weak and poor in stores at this date in my apiary. I have lost 125 out of 350, and the loss will amount to 150, ere warm weather arrives. As the law of supply and demand governing prices has not yet entirely deserted apiculture, every dead colony enhances the value of all the living. All bloom is 2 weeks behind time.

JAMES HEDDON.

Dowagiac, Mich., May 22, 1883.

Prospect Good.

The bees are doing well, in spite of the weather. We had a white frost last night, and the night before, and a big swarm of bees to-day. White and alsike clovers are coming on finely, and the prospects are good for a large honey crop.

J. V. CALDWELL.

Cambridge, Ill., May 23, 1883.

Cyprians Ahead.

Last fall I had 55 colonies (5 being weak ones); and, out of the 55, I lost 11; one starved, 3 swarmed out this spring, and seven died with the dysentery. The Syrians and Cyprians wintered the best of all, with few exceptions, and the Cyprians are ahead of all, for they have more brood and honey than any of the rest; the outside combs are filled up with new honey, and sealed up two-thirds of the way down, and last Saturday (19th) one of them swarmed. How is that, for Cyprians, for a wet and cold spring? I think the Cyprians are the hardiest race of bees in America. I handle my Cyprians without gloves or veil, and do not get stung very often either. I think the man that is disposing of his Cyprians is fooling his time away. The snow is 2 inches deep this morning, and is melting fast, and it is raining now. This has been the worst spring for bees I ever saw, and it does not look very favorable this morning. I do not think my Cyprians will swarm to-day, and yet I expect them to swarm as soon as it gets warm again.

L. A. LOWMASTER.

Belle Vernon, O., May 22, 1883.

A Wrong Righted.

In my article, on page 252, headed, "That 'Three-Ring' Fancy," in trying to right myself, perhaps I wronged Mr. Heddon; if so, I apologize, for I had no such intention; far from it. As I am a believer in short sermons, perhaps I did not make things clear. Some may think I was trying to cast a reflection on Mr. Heddon's way of breeding, but I had no such thought. Honestly, I believe his way of crossing the dark leather-colored Italian with the brown German bee, will, in time, bring forth the true *Apis-Americana*—the "bread and butter" bees. W. H. SHIRLEY.

Glenwood, Mich.

A Snow Storm in Indiana.

We have had the worse snow storm ever known for this time of year, in Indiana. It commenced with a cold rain, and yesterday, about 10 o'clock, it turned to snow, and snowed until night; although it melted very fast, there was about 2 inches of snow on the roofs, boards, etc. It snowed more last night, and fruit trees are bent to the ground, and the timber is mourning under its heavy burden. I think there has fallen quite one foot of snow, since yesterday morning. Bees were doing extra well; their brood-chambers are full of brood and honey, and some were storing honey in the boxes. White clover is beginning to bloom, and is as plenty as I ever saw it, and everything looked favorable for a good harvest, but it looks dismal this morning.

A. FRAZER.

Bloomingsport, Ind., May 22, 1883.

In Good Spirits.

Bee-keepers are in good spirits—having prospects of a rich, white clover harvest. Bees are in fine condition, and are gathering honey rapidly from the clover.

N. P. ALLEN.

Smith's Grove, Ky., May 23, 1883.

Some Corrections.

DEAR JOURNAL:—In an article written by me on the 17th of March, and published on the 16th of May, on pages 248 and 249, you make me say: "I purchased 2 colonies of bees in December, 1883." I meant to have said 1863. And on page 249, in my 3d rule, "To cool off the cellar, when the weather outside is colder than 40°, let in as little air as will keep the bees alive, and keep ice in the pipe." I meant to have said: To cool off the cellar, when the weather outside is below 40°, let in more air; and when the weather outside is above 40°, let in as little air as will keep the bees alive, and keep ice in the pipe." And in the 1st rule, same page, the "have them." etc., should be, having them, etc., making the cushioning and otherwise keeping them warm, one of the requisite conditions to late breeding. If you will kindly make this correction, my meaning will be better understood.

H. V. TRAIN.

Mauston, Wis., May 19, 1883.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., May 28, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The nominal price of extracted is 7c. for dark and 9c. for light—here. The supply is abundant and sales are slow.

BEESWAX—None in the market.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY.—The market for extracted honey is lively, and the demand exceeds the arrivals. Our stock is small and we are in danger of having sold out every day. We pay 7@10c. for good honey on arrival, the latter price for choice clover. There is a small demand for comb honey, and prices nominal.

BEESWAX.—Arrivals of beeswax are plentiful. We pay 35c. for a good article on arrival.

CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand is light and it is not now probable that all of the comb honey can be sold before a new crop comes. Prices are very irregular and generally low: 15@16c. for white, and dark unsalable. Extracted, very little trade is being done in it. 7@9c. is about the market.

BEESWAX—35@36c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—Stocks and the demand are both light. More or less difficulty would be experienced in filling a large order for a straight lot.

White comb, 14@17c.; dark to good, 11@13c.; extracted, choice to extra white, 8½@9½c.; dark and candied, 5@7½c.

BEESWAX—Wholesale, 27@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Dull; light jobbing sales only. Comb at 10@14c.—Strained and extracted at 7@7½c.

BEESWAX—Sold lightly at 32@34c.

W. T. ANDERSON & CO., 117 N. Main Street.

CLEVELAND.

HONEY—Stocks of honey are running low with us. 1-lb. sections are all sold and there is a very light inquiry for such; would probably sell at 18@20c. 2-lb. sections are not in demand, and no sales to quote, asking 17@18c. Extracted no sale at 9@10c.

BEESWAX—Not offering.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—Our supply is gone; we have none to quote.

CROCKER & BLAKE, 57 Chatham Street.

◆

A $20.00 Bible Reward.

The publishers of *Rutledge's Monthly* offer twelve valuable rewards in their *Monthly* for June, among which is the following:

We will give $20.00 in gold to the person telling us which is the shortest verse in the Old Testament Scriptures by June 10th, 1883. Should two or more correct answers be received, the reward will be divided. The money will be forwarded to the winner June 15th, 1883. Persons trying for the reward must send 20 cents in silver (no postage stamps taken) with their answer, for which they will receive the July *Monthly*, in which the name and address of the winner of the reward and the correct answer will be published, and in which several more valuable rewards will be offered. Address, RUTLEDGE PUBLISHING COMPANY, Easton, Penna.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

◆

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

◆

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

◆

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......$1 00
" 100 colonies (220 pages)...... 1 50
" 200 colonies (420 pages)...... 2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

BOOK CLUBBING LIST.

We will supply the **American Bee Journal** one year, and any of the following Books, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The Weekly Bee Journal,	$2 00	
and Cook's Manual, 7th edition (in cloth)	3 25	2 75
Cook's Manual, (in paper covers)	3 00	2 50
Bees and Honey (T.G.Newman) cloth	2 75	2 50
Bees and Honey (paper covers)	2 50	2 25
Binder for Weekly Bee Journal	2 75	2 50
Apiary Register for 100 colonies	3 50	3 00
Apiary Register for 200 colonies	4 00	3 50
Dzierzon's New Bee Book (cloth)	4 00	3 50
Dzierzon's New Book (paper covers)	3 50	3 00
Quinby's New Bee-Keeping	3 50	3 25
Langstroth's Standard Work	4 00	3 75
Root's A B C of Bee Culture (cloth)	3 25	3 00
Alley's Queen Rearing	3 25	3 00
Scribner's Lumber and Log Book	2 35	2 25
Fisher's Grain Tables	2 40	2 25
Moore's Universal Assistant	4 50	4 25
Honey as Food & Medicine, 50 Copies	4 00	3 75
Honey as Food & Medicine, 100 Copies	6 00	5 50
Blessed Bees	2 75	2 50
King's Text Book	3 00	2 75

The **Monthly Bee Journal** and any of the above, $1 less than the figures in the last column.

◆

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1 year, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with $6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For four subscribers, with $8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with $10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

◆

Special Notice.—We will, hereafter, supply the Weekly BEE JOURNAL for one year, and the seventh edition of Prof. Cook's Manual of the Apiary, bound in fine cloth, for $2.75, or the Monthly Bee Journal, and the Manual in cloth for $1.75. As this offer will soon be withdrawn, those who desire it should send for the book *at once*.

◆

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

Bingham Smoker Corner.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent post-paid for **$1.75.** Address,

BINGHAM & HETHERINGTON,
Abronia, Mich.

All Excelling. — Messrs. Bingham & Hetherington, Dear Sirs:—I am now selling your Smokers almost exclusively. You are excelling yourselves in smokers all the time.

Respectfully, J. G. TAYLOR.
Austin, Texas, May 10, 1883.

Cyprians Conquered.

All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's "Conqueror Smoker" did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham.

G. M. DOOLITTLE.
Borodino, N. Y., Aug. 15, 1882.

During the following three months, Bingham Smokers will be sent post-paid, per mail, on receipt of the following prices:

The "Doctor"	(wide shield)	—3½	in. fire tube,	$2.00
The Conqueror	(wide shield)	—3	in. fire tube,	1.75
Large	(wide shield)	—2½	in. fire tube,	1.50
Extra	(wide shield)	—2	in. fire tube,	1.25
Plain	(nar. shield)	—2	in. fire tube,	1.00
Little Wonder	(nar. shield)	—1¾	in. fire tube,	.65
Bingham & Hetherington Uncapping Knife				1.15

With thanks for letters of encouragement, and the absence of complaining ones, we tender to our thirty-five thousand patrons our best wishes.

Very Respectfully Yours,
BINGHAM & HETHERINGTON.
Abronia, Mich., June 1, 1883.

Foul Brood Pamphlet.—Wishing to be relieved of sending out my pamphlet on Foul Brood, I have made arrangements with Mr. T. G. Newman to supply them to the bee-keeping fraternity desiring them. Price 25c.

A. R. KOHNKE.
Youngstown, O., April 25, 1883.

SPLENDID QUEENS, by Mail. $1 each; 6 for $5.50. **F. L. WRIGHT**, Plainfield, Mich.
22A3t 6B1t

NO MORE BEES TO SELL.—I cannot fill any more orders for bees. I have already sold myself short. **W. H. BALCH**, ORAN, N. Y.
22A1t

QUEENS!

During June and July, I shall be prepared to furnish the CHOICEST OF QUEENS, both tested and untested, from two different strains. 1. From my new strain, viz: a cross between the Brown, German, and dark leather-colored Italian. 2. Pure Italians reared from imported mothers. With my hives of all worker combs, using drone comb where I desire it only, isolated from other apiaries, I have the best of opportunities to control the mating of my Queens. I rear Queens under the swarming impulse only, and upon the true plan of getting the best and most vigorous stock. All orders filled in turn, and it is useless to hurry us.

PRICES:

Tested Queens (all selected) each,	$ 3.00
Untested before July 1, each,	1.50
Uuntested after July 1, each,	1.00

These are bottom prices in any quantity. Send for descriptive Catalogue to

JAMES HEDDON, Dowagiac, Mich.

THE HANDY BOOK.

Read the opinion of one of the most eminent writers on bee matters:

Bound Brook, N. J., May 4, 1883.

FRIEND ALLEY:—Handy Book received. I am happy to say that I consider that it tells more on the vital subjects of rearing Queens and managing bees so as to take honey, than any book now before the public. It seems to be filled with just those things which practical men find out about their business in a lifetime of work, but which they generally don't tell the dear public.

J. HASBROUCK.

The HANDY BOOK has received from those most competent to judge of its value, more praise than any book now in print. Send for our Circular and get their opinions.

HENRY ALLEY, Wenham, Mass.
21Atf

A NEW BEE BOOK!

BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN,

Editor of the Weekly Bee Journal.

925 West Madison Street, Chicago, Ill.

It contains 160 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey Bee, and at the same time produce the most honey in its best and most attractive condition.

Appreciative Notices.

A neat and abundantly illustrated hand-book of apiculture.—American Agriculturist, N. Y.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Tenn.

Contains all the information needed to make bee-culture successful.—Eagle, Union City, Ind.

Just such a work as should be in the hands of every beginner with bees.—News, Keithsburg, Ill.

Valuable for all who are interested in the care and management of bees.—Dem., Allegan, Mich.

Engravings are fine. Gotten up in the best style, and is cheap at the price.—Farmer, Cleveland, O.

It comprises all that is necessary for successful bee-culture, save experience and good judgment. —Daily Republican, Utica, N. Y.

Written in an interesting and attractive manner, and contains valuable information for all readers, even though they be not directly interested in the care of bees.—Sentinel, Rome, N. Y.

It is a valuable and practical book, and contains a complete resume of the natural history of the little busy bee, as well as of all that one needs to know in their care and management.—Chicago Herald.

Contains a vast fund of information in regard to bee-culture. He who would keep abreast of the times must keep posted in all the improvements in his line. We advise all interested to get a copy of this book.—Daily Times, San Bernardino, Cal.

It embraces every subject that will interest the beginner. It describes all the newest discoveries in the art by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive form. It is embellished with beautiful engravings, and is the most perfect work of the kind, for the price, that has ever come under our notice.—Farmer, Lancaster, Pa.

PRICE—Bound in cloth, **75 cents**; in paper covers, **50 cents**, postpaid.

THOMAS G. NEWMAN,
925 W. Madison St., Chicago, Ill.

OPIUM **Morphine Habit Cured in 10 to 20 days.** No pay until cured. J. L. Stephens, M. D., Lebanon, O.
18A4t

PURE ITALIAN BEES AND QUEENS,

Tested and untested Queens, nuclei in Langstroth size frames, full colonies, queens by the half dozen, bees by the pound. Send for prices and particulars.

A. B. MILLER & SON,
Wakarusa, Elkhart Co., Ind.
44Atf

ELECTROTYPES

Of Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. **THOMAS G. NEWMAN.**
925 West Madison Street **Chicago, Ill.**

OLDEST BEE PAPER IN AMERICA
THE AMERICAN BEE JOURNAL
ESTABLISHED IN 1861

VOL. XIX. CHICAGO, ILL., JUNE 6, 1883. No. 23.

THE AMERICAN BEE JOURNAL
Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

The Clouds of Adversity Departing.

The present Spring, if it deserves that name, has been one of severe trial for the bee-keeper. Winter, as an unwelcome guest, lingered in the lap of Spring so long that his presence became irksome and disgusting. We have the following wail from Mr. Heddon:

Still Snowing.

Byron said, "The moon is up, and yet it isn't night." We can say, "It snows yet, but still it is not winter." Bees were never so weak and poor in stores at this date in my apiary. I have lost 125 out of 350, and the loss will amount to 150, ere warm weather arrives. As the law of supply and demand governing prices has not yet entirely deserted apiculture, every dead colony enhances the value of all the living. All bloom is 2 weeks behind time. JAMES HEDDON.

Dowagiac, Mich., May 22, 1883.

And Mr. Doolittle wrapped himself in his overcoat and sighed:

Cold, Cold, Cold.

We have not had 5 days so far this year, warm enough to open the bee hives without danger of chilling the brood, of which there is but little. It freezes nearly every night. On the morning of the 14th, ice was found $\frac{1}{4}$ inch thick. Bees are getting poor in numbers and short of stores.

G. M. DOOLITTLE.

Borodino, N. Y., May 17, 1883.

While Mr. Demaree records the fact of having

A Cold Wave in Kentucky.

Notwithstanding the weather here has been very changeable, the season so far has not been altogether unfavorable. My bees have built up rapidly, and have done well on fruit bloom, dandelion, etc. Locust opened on the 13th inst., and gave a deluge of nectar till cut short off by the cold wave of the 21st. We had a skift of snow (a sight never before witnessed here at this season of the year), on the night of the 21st. The bees were housed for 3 days. White clover is wasting. I have been feeding a swarm that issued just before the present cold, rainy, gloomy spell. The prospects look better to-day (23d). I notice that the three dismal, cold, rainy days just past, have afflicted some of my nursing nuclei with dysentery. The weather has been unfavorable to queen rearing—too changeable.

G. W. DEMAREE.

Christianburg, Ky., May 23, 1883.

And Mr. Frazer is not at all pleased with

A Snow Storm in Indiana.

We have had the worse snow storm ever known for this time of year, in Indiana. It commenced with a cold rain, and yesterday, about 10 o'clock, it turned to snow, and snowed until night; although it melted very fast, there was about 2 inches of snow on the roofs, boards, etc. It snowed more last night, and fruit trees are bent to the ground, and the timber is mourning under its heavy burden. I think there has fallen quite one foot of snow, since yesterday morning. Bees were doing extra well; their brood-chambers are full of brood and honey, and some were storing honey in the boxes. White clover is beginning to bloom, and is as plenty as I ever saw it, and everything looked favorable for a good harvest, but it looks dismal this morning.

A. FRAZER.

Bloomingsport, Ind., May 22, 1883.

Mr. G. W. Ashby grows despondent over his

Sad Case of Spring Dwindling.

I send the discouraging news of my sad disappointment in my bees. I doted upon my 66 colonies which I had in the fall of 1882. Now I have 56; they wintered well enough, but dwindled away in the spring, till my loss is ten; and nearly one-half of the others are to-day nothing more than nuclei. If I unite them, or wait until they build up, I shall get no honey this season, from a part of them. We are now in the locust, poplar and white clover bloom, etc. The bees all have a good quantity of brood. It has been a very bad spring here; it was too cold during peach and apple bloom. On May 15, we had almost a blizzard. We had to wrap up as in winter. Now it is too windy and dry; the bees cannot stick to the locust blossoms; they are blown and tossed about in every direction, and many are lost in the pond. It is awful to see my pets have such a time. I fondly anticipated a glorious harvest, this season, of several thousand pounds of honey. I ordered a lot of bee supplies and foundation to aid them, but all my fond hopes are blasted. Not a swarm yet, and but few colonies look likely to make a surplus. I have one colony in the Cunningham hive, which seems to outstrip all the others. They are at work in four boxes of 5 pound weight; more than one-half built out, and partly filled with honey. The others are in the Langstroth hive. If you ever saw any one have the blues, I am the one. I have quit looking after my farming interest, and gone wild on the bee, that wonderful insect. I will have to give up, and keep one or two to study their mysterious ways. My whole thoughts were centered on the bee, but, alas, I must look after some other business for a livelihood. I got all kinds of seeds to sow for my bees; last year I had a fine lot of sweet clover. My bees went wild over it; this year there are only about 100 plants to the acre, all told. Alsike is in tolerable condition; Simpson honey plant, fine; Rocky Mountain bee plant, none; spider plant, none. My grief is past endurance. G. W. ASHBY.

Valley Station, Ky., May 17, 1883.

Judge Andrews gives a cheerless account of

The Spring in Texas.

There never has been such a spring for bees in South Texas before; my bees have not swarmed as much up to this date as they did last year by the 27th of March. They have not increased 3 per cent. yet, and the prospect for more than 25 per cent. is poor; but I confess that *we* are sailing in "unknown waters."

W. H. ANDREWS.

McKinney, Texas, May 27, 1883.

And Dr. H. M. Williams reports discouragingly that it is

Still Cold in Georgia.

We are having the latest spring here I have known in 20 years. For the last three mornings the thermometer stood at 42°, and we have had considerable frost. Bees have done nothing in the way of storing honey in the upper story. My bees are swarming some, and I am hiving them on full combs, where my bees died in the winter. When I put a swarm in a hive full of empty combs, they go back and rob the old hive, so I have to move the old one. I expect they rob the old one because the honey flow is small. I have 60 colonies; some pure Italian, some hybrid, and I am satisfied my mixed bees, with the pure blacks and Italians are the best bees I have, for honey; though not so easy handled. I am always glad when the BEE JOURNAL comes; I could not do without it.

H. M. WILLIAMS, M. D.
Bowden, Ga., May 24, 1883.

These letters are anything but encouraging; truly, in the language of Thomas Paine, "These are the times that try men's souls." We do not wonder why some may become discouraged, as they view the untenanted hives and soiled combs which are left, as the sequel to their cherished hopes for the future. However, none should be too hasty in passing judgment. With the hives and combs already provided, more than one-half the original investment is saved, and with a propitious season for the present, our losses will be made good with a credit in our favor on the balance sheet. We cannot expect bee-keeping to be unvaringly prosperous, any more than any other special branch of industry which is dependent upon natural causes, but we can, with forethought, industry and systematic *perseverance*, make it as reliable as any other.

Were it only the lesser bee-keepers, or the novices, who had suffered losses, it might, perhaps, be attributed to ignorance or negligence; but when we take into account the losses by specialists and scientific bee-keepers, we cannot but look upon such a charge as an insult to intelligence.

The fruit-grower expects frequent failures in his crops, and is thankful that his trees survive without injury; the farmer's wheat winter-kills, when he plows up the ground in the spring and plants anew in corn or something else, and replants if frost kills that; the stock-raiser who loses part of his flock, gives the remainder better attention, and patiently toils two or three years to repair his losses; the merchant has his seasons of loss, but with renewed *push* and activity makes up for the dull times when the "good time coming" has arrived; and the energetic bee-keeper, although many bright dreams may have vanished, will not despond, but without taking time to count the untenanted hives, begins immediately to estimate the number he can refill, working with a will to retrieve his losses; and while keeping time with the musical hum of his bees, in the "Sweet by-and-by" will reap a more than commensurate recompense for his vexations and disappointments.

As we write this the air has again become warm, the sun shines out as cheerfully as it ever shone on a summer's day. The robin's cheerful piping, and the bluebird's merry song can be heard in the early morning, as the golden sunshine tips the hill-tops, and the hills and valleys are arrayed in gorgeous robes of emerald green.

The trees, plants and shrubs have commenced to bloom here in the North, and soon the heavy basswood will enrich the hives, making them to overflow with the rich nectar. Let all, therefore, take courage and prepare for a vigorous season's work—the sunshine already succeeds the storm, and chases the gloom away. Be cheerful and hopeful—there is no time to lose. Nature now awakens to life; the far-stretching fields clothed in emerald green, the lawns and lanes with their grassy carpets, the air laden with the sweet perfume of the blossoms in garden and orchard, the trees in forest and grove animated with the feathered songsters whose little lives seem an incarnation of happy melody—all these combine to help us forget the dreary hours of the past, and with keener zest enjoy the future.

"Into all lives rain must fall,
Over all lands the storm must beat,
But when the pain and the storm are o'er
The after-sunshine is twice as sweet.
Through every straight we have found a road,
In every grief we have found a song,
We have to bear, and have had to wait,
But think how well we have got along."

☞ We have received from Mr. Wm. Sims, Secretary of the Kansas State Board of Agriculture, at Topeka, a pamphlet entitled "Kansas, its Resources and Capabilities," which is being printed in the English, German, Swedish, and Danish languages, for gratuitous distribution, and will be sent to any one upon application, or will be mailed to any address furnished, either in this country or Europe, the person sending address to indicate the language desired. It contains a map of the State, and several views of farms, cattle, ranches, etc., and is full of useful information concerning that State.

☞ Mr. Alley's new book on Queen Rearing will hereafter cost $1.25

Honey and Bee Show in Canada.

Mr. A. Robertson, of Carlisle, in the *Canadian Farmer* gives the following list of prizes offered in the Honey and Bee Department of the Hamilton Central Fair:

As the directors of Hamilton's Central Fair had a meeting on April 24, I am now able to present our prize list. I feel like giving three cheers to the directors, for the way they used us; they gave us nearly everything we asked for. Last year we were mixed up with the *fruit*, such as turnips and cabbages, and the prizes altogether amounted to about $20. This year we are to have a class by ourselves, and they are offering prizes to the amount of $70. They also allow us to appoint our judges, and we will endeavor to get practical bee men, who each use a different size frame and hive.

Prizes offered by the Central Fair Association:

	1st.	2d.
For best Comb Honey, not less than 10 pounds	$5.00	$3.00
For Best Extracted, not less than 10 lbs.	5.00	3.00
For Best display of Comb Honey	8.00	4.00
For Best display of Extracted	8.00	4.00
For Best and largest display of both kinds	Medal and Diploma	
For Best Exhibition and management of Bees	10.00	5.00
For Best Hive for Comb Honey	4.00	2.00
For Best Hive for Extracted Honey	4.00	2.00
For Best Hive for all purposes	Medal and Diploma	

The following are by our Bee Association and Specials:

Best display of Apiarian Supplies	$10.00	$5.00

Specials given by D. A. Jones, Beeton, Ont.:

Best display of Extracted Honey, put up in the most pleasing and marketable shape, best imported Holy Land Queen, valued at	$15.00
Best display of Comb Honey, in the best marketable shape, best imported Cyprian Queen, valued at	$10.00

In both of the above classes, exhibitor must be producer.

Special by Green & Robertson, Carlisle, Ont.:

Best Bee Hive for all purposes, Chaff Hive complete, for Comb Honey, valued	$5.00
Root's Simplicity Hive complete, for Extracted Honey	2.00

Special by J. M. Knowles, President of the Association:

Best Observatory Hive	$5.00

Special by *Canadian Farmer*:

Best display of Wax, *Canadian Farmer* for one year	1.00
Best Honey Crate, *Canadian Farmer* for one year	1.00

☞ Ants are sometimes troublesome in an apiary. They can be destroyed by sprinkling salt around the hives and in the ant-hills.

☞ Renewals may be made at any time; but all papers are stopped at the expiration of the time paid for, unless requested to be continued.

☞ Postage stamps, of one, two or three cent denomination, accepted for fractional parts of a dollar; but money is preferred, for larger amounts.

How to Foretell the Weather.

A. J. DeVoe, of Hackensack, N. J., sends to the Farmers' Club of the American Institute, the following nine rules by which, it is said, a person in any part of the Northern Hemisphere (north of 15° of latitude) can form an accurate opinion of the wind and weather for a hundred miles around him:

1. When the temperature falls suddenly, there is a storm forming south of you.
2. When the temperature rises suddenly, there is a storm forming north of you.
3. Wind always blows from the region of fair weather toward a region where the storm is forming.
4. Cirrus clouds always move from a region where a storm is in progress toward a region of fair weather.
5. Cumulus clouds always move toward a region where a storm is raging.
6. When cirrus clouds are moving rapidly from the north or northwest, there will be a cold rain storm on the morrow; if it be winter, there will be a snow storm.
7. The wind blows in a circle around a storm, and when it blows from the north, the heaviest rain is east of you; from the south, the heaviest rain is west; from the east, the heaviest rain is south; from the west, the heaviest rain is north of you.
8. The wind never blows unless rain or snow is falling within 1,000 miles of you.
9. Whenever a heavy white frost occurs, a storm is forming within 1,000 miles north or northwest of you.

A few Seasonable Hints.

As there has, during this spring, been so much cool and wet weather, the bees are suffering for food. Mr. Oatman, who was in our office a few days since, says he is systematically feeding his bees every day in order to keep them strong in numbers, and ready for the honey harvest. Mrs. L. Harrison, in the *Prairie Farmer*, remarks as follows:

> Those who are desirous of increasing their colonies, should feed liberally, whenever the honey flow fails, either by reason of cool or rainy weather, so that brood-rearing will not be retarded. Large quantities of stores are consumed in brood-rearing, as a bee eats more in a larvæ state, than during the remainder of its life. New swarms sometimes, perish during long continued rainy weather, by starvation. It is good management to feed during intervals of honey-gathering, as the queen lays, not according to the stores on hand, but in ratio to her income.
>
> Some colonies have too much honey, so that the queen has not room enough to lay; when this is the case, it should be removed, and may be exchanged for empty comb, from a less provident stock, and both be benefited. Diluted honey, or syrup made of either brown or white sugar, can be fed almost any way, at this season of the year. Great care should be exercised, lest robbing is induced, by dropping the feed around the hives. The feed should be thin, and the vessels holding it should contain cut straw or little floats to prevent the bees drowning, or a piece of thin cloth can be spread over the surface. Where two story hives are used, the feed can be placed in the upper one, and a small aperture made to allow the bees to come up from below; or if a division-board is used, it can be placed back of it. Anyway that does not admit bees from the outside, or let the warmth from the cluster escape.

Bee-Keeping in Florida.

Mr. J. M. Lisenby, of Cedar Key, writes to the Florida *Journal* as follows concerning bee-keeping:

> As the interest in Florida and its various resources are attracting considerable attention, I will try to give some facts in regard to bee-keeping—an industry that can be made successful in quite a large portion of the State. It is true that a great deal of the interior—especially the high pine lands—is not adapted to bee-culture, while the Atlantic coast, south of St. Augustine, and the Gulf coast, south of Cedar Key, certainly are rich honey-producing sections.
>
> In the best bee pastures of the State the season for storing surplus honey only lasts about two months; but in this short time they will store from 100 to 150 pounds per hive, and the remainder of the year they will gather enough for their support.
>
> At Cedar Key the bees commence breeding in January, and continue to breed until November. They usually commence to swarm in March, and continue until about the first of June, when the work of storing surplus honey begins.
>
> The mangrove is the principal honey-producing plant, and the honey gathered from it cannot be excelled in appearance, even by the white clover honey of Vermont, and the superiority of the mangrove over other honey-producing plants, is that, growing as it does in the marshes, it is never affected by the floods or drouth.
>
> The honey produced from the palmetto is also of good appearance and flavor, yet it is not so reliable as that from the mangrove.
>
> I have never been in any country where I had as little trouble to manage bees as this. They are never troubled by worms or bee-moths, if they are kept in anything like good condition.

☞ Mr. Joseph D. Enas, Napa, Cal., has issued a six-paged circular and price list for Queens and Supplies for the Pacific Coast.

Honey Production in Canada.

> I enclose an item of bee news, clipped from the Montreal *Witness* of May 9, containing an inquiry and reply by D. A. Jones, of Beeton, Ont., who edits the bee department of that paper. I think Mr. Jones' reply does American honey producers an injustice. I have lived in Canada for 40 years, and my experience and observation have been the very reverse. What is your opinion?
>
> Marlette, Mich. WM. SHIER.

In answer to the inquiry, Mr. Jones makes the following very extravagant assertions:

> I strongly I advise your remaining in Ontario. You will find that the people of Canada are better educated to the use of honey—and especially extracted honey, which is more profitable than comb. Packages for putting up honey are cheaper in Canada than the United States, and we seem to be far ahead of our neighbors in the style of putting them up. The labels which are being used by the United States' dealers now so extensively are made here in Canada, and the duty they pay is high. Above all these considerations there are localities in Canada which are superior to any in the United States. For large yields of honey the West is second to no country in the world, and our bee-keepers are at the present time more than equal in the race as regards supremacy for fine bee-keeping. Many of the new devices and improvements emanate from Canada's bee-keepers.

Many persons think their own bees, hives, utensils and locations are the best, and, perhaps, this individual and local pride dictated the reply of Mr. Jones. Of course no one on this side of the boundary will agree with him.

Honey for the Children.—The *Farmers' Review* thus comments approvingly on a late editorial in the BEE JOURNAL:

> Editor Newman, of the BEE JOURNAL, wisely suggests that those parents who feed their children on candies and syrups, because they want something sweet, to the great injury of the children, would find their children growing healthy and happy too, if given good honey instead of candies that are so fearfully adulterated.

☞ The number of the *Bulletin D' Apiculture pour la Suisse Romande*, for May, has a full-page illustration of Mr. Chas. Dadant, of Hamilton, Ill. It is a lithograph, and is quite natural.

☞ The *American Apiculturist* is the title of a new monthly just started by S. M. Locke, at Salem, Mass. It contains 32 pages, and makes a very creditable appearance.

CORRESPONDENCE

For the American Bee Journal.

Systematic Breeding, etc.

G. W. DEMAREE.

On page 236, present volume of the BEE JOURNAL, Mr. Heddon approaches the old subject, "Best bees, etc," with apology and apparent trepidation; but still he approaches the subject and comes prophesying.

The subject is "unpleasant" just now, but there are "millions in it." "Three-fourths" of the bees sold hereafter will be hap-hazard-hybrids. I only take the liberty to put it in plain English. I mean nothing but good to the cause of apiculture. I write this article not because it is pleasant or "unpleasant" to me, but because I wish to raise the standard of systematic breeding rather than to trail it in the dirt, and rather because as a breeder, I do not seek to be released from responsibility as to the character of my queens and bees.

I protest against the present tendency—mercenary tendency—to lower the standard of bee-breeding below the standards adopted and approved by all breeders of domesticated animals. I can see no reason why bee-breeding should not be entitled to as much dignity as a business as other like occupations.

"Bees for business" may be suggestive to some people of the hasty-made dollar, but to me it sounds like a clap-trap, cheap advertisement. Let us suppose that a prominent breeder of farm stock should breed his "breeding stock" for "business," ignoring pedigree and purity of blood. Could any one doubt the result of such a course? He would soon find himself "ignored" as a breeder, and justly too, because the very necessity of the case demands, that, in breeding stock, some distinguishing features must be adopted as a test of the purity of the stock, and as a guarantee of good faith on the part of the breeder. So important is this matter considered by the stock interest in Kentucky, that the Legislative department of the State have enacted statutory laws to punish fraudulent, and protect honest breeders.

A prominent stock breeder has suggested that the reason why the mule has been a perpetual success is, because he is a "mule," and, therefore, cannot be deteriorated by unlimited crossing by those who are ignorant of the laws of scientific breeding.

It has occured to me that it would be better for the future good of apiculture if the hybrid bee (the word "hybrid" in bee lore means a cross between the Italian and German races) was, in fact, a mule, in which case they might justly and properly be called "bees for business." The first cross between the two races make good business workers, but they are utterly unfit for breeding stock.

I insist that every honorable breeder of bees should be able to give a description of his stock sufficiently comprehensive to enable any one to identify them, and distinguish them from other races and strains of bees.

The transparent attempts, of late, to render rediculous the chief features by which the Italian or yellow race of bees is most easily identified, is the severest blow of all to scientific breeding. All who have cared to read my articles on the subject of the three-band test, are aware of what my views are concerning that matter, and I need not consume time and space to go over the grounds again; but I do say that there is no such a thing as Italian bees without the yellow bands, and those who sneer at "bands" and "stripes" simply sneer at the Italian bee. I have no controversy with those who prefer native or mixed bees to the Italian, but they should stand to their position.

Let us look for a moment at this matter of "bands" and "stripes." Most breeders are able to describe the stock sold by them so clearly that they can be identified as a distinct race or variety. Some insure their tested queens to produce workers that will show the three-bands, if filled with honey and placed in a window. Some insure them to show the bands while standing on the combs; others sell "golden" Italians. If these last know what a golden Italian is, the workers must show the beautiful golden plumage in addition to the bands. Pure Albinos must have the white or silver bands, which consist of plumage, in addition to the regular bands.

Other distinguishing features may be named. My favorite strain of bees may be described as slender in form, the second band conspicuously broad, while the corslet and posterior bands are rather narrow, but finely cut and distinct. As a general rule they have but little plumage on their bodies, and that little is of a light, but not of a golden hue, as is the case with the golden variety.

I would describe them generally as slender, orange-banded bees. If there are any bees in the country that can beat them as honey-gatherers, I have a reasonable number of dollars which I would like to exchange for a few colonies of them. It will be seen that the several strains of bees described above may be identified wherever seen by the description given.

Now, apply the test to the "business bees" about which we have heard so much of late. It will be admitted that Mr. Heddon is good authority on the subject, and if there is a man living who can give an intelligent description of the "business bee," Mr. H. is the man to do it. Well, I have been reading his articles on "Business get-there bees" in nearly all the bee papers for two years past, and the most that I can make of it is, they are "larger" than some "shorter" bees are, and "darker" than some "lighter" bees are, and may or may not have "stripes." The description is wonderfully accommodating. No one, I presume, but Mr. Heddon, can indentify them.

Christiansburg, Ky.

For the American Bee Journal.

Texas State Bee-Keepers' Convention

The fifth annual meeting of the State Bee-keepers' Association was held in the apiary of Judge W. H. Andrews, at McKinney, Texas, on April 17 and 18, 1883.

After the routine business was done, the president addressed the meeting upon the subject of "Conventions." The address, though well-timed and interesting, but we have thought best not to send for publication, as we fear we may overtax the space of our valuable JOURNAL.

Dr. W. K. Marshall, of Marshall, then read his admirable essay on the "Different races of bees." [As soon as I am furnished a copy I will forward for publication.—*Sec.*]

The question was asked, "Are Cyprians remarkable as workers?" to which Dr. Marshall replied: They are swift on the wing, and as industrious as any bees he ever handled, and gave as good results.

In answer to a question as to the temper of the Cyprians, the Doctor said they are cross, very easily angered, and when aroused, would sting everything on the yard, from chicken to king; and would not "down," but they were not a ghost.

Judge Andrews said he could not speak from a satisfactory trial, having handled but 3 colonies, which were enough to do him "the rest of the way."

It was asked if it is true that their queens are so wonderfully prolific as they are said to be?

Dr. Marshall said they are great breeders, and that he had thought they had too much at certain seasons. Judge Andrews said that Dr. Dzierzon says they breed so late in the fall that in bad honey years they often come out rich in bees, but poor in honey.

It was asked of Dr. Marshall, what are dark Italians? He replied that he regarded them impure bees, whether home-bred or imported.

E. H. West, of Tarrant county, asked Judge Andrews if he thought Italian bees swarmed more than blacks? He replied that he could see no difference as to that.

Are Italians better honey gatherers than the blacks? Dr. Marshall said he could not say that they were, but that they possessed some valuable traits peculiar to their race. Judge Andrews said he did not know what those traits are, but that he claimed but two points for the Italian over the blacks and all others; those are beauty, most exquisite, and amiability; that he could manipulate two colonies of Italians to one of the other races; he says the queens of the other yellow races are not near so beautiful as those of the Italians.

Judge Andrews was asked if he thought that hybrids are more irascible than blacks, as taught in our leading books on bee-culture? And he replied, that his bees became good-mannered in proportion to their Italian blood, and *vice versa*.

It was asked, "Can we, by the co-mingling of races and careful selection, reach the 'coming bee?'" Judge Andrews said he would try to give his "say" on that subject in his essay on the coming bee, that *aint coming*.

Convention adjourned till 2 p. m.

FIRST DAY—AFTERNOON SESSION.

An essay of B. F. Carroll, of Dresden, Navarro county, was read by the secretary.

[I will send it as soon as transcript is obtained.—*Sec.*]

Judge Andrews was asked if he could approve Mr. Carroll on the bee moth? To which he replied that he could not; that the so-called bee moth, more properly the *comb worm*, is not an enemy to the bee; that no colony of bees was ever destroyed by the bee-moth larvæ; they never infest combs used by the bees; that abandoned combs only became a prey to those worms. He was then asked why the books taught this fallacy? To which he replied that our books do not all teach it; that they had been read through the "glasses" of a barbarian tradition; he then opened Quinby's New Bee-Keeping, page 228, and read as follows: "Let it be distinctly understood by all beginners that the moth is not the cause of the decline of a once healthy stock. It simply takes advantage of the weakness induced by other causes."

Dr. Howard said that the so-called bee moth subsisted wholly upon the comb as constructed by the bees; that foundation made from pure wax was not attacked; that comb constructed upon it was infested only for the sake of the additional natural comb. He said that Judge Andrews called his attention to this a year ago, in a remark that the moth larvæ could not subsist upon pure beeswax.

M. H. Davis, of Grayson county, asked if these worms could subsist upon bee-bread?

Judge Andrews said he thought not, but could not speak from a satisfactory trial.

Dr. Howard said, that they could not; that they must have comb.

J. H. Manlove, of Fannin county, asked, "How long do fertile workers live?" Dr. Marshall said, that he thought they partook of the nature and longevity of the queen; that in their development they, perhaps, obtained a portion of royal jelly, the food intended for the queen larvæ, which caused a greater development of the reproduction organs. Judge Andrews thought that laying workers live just as long as other worker-bees.

Is there more than one fertile worker in a hive at one time, was asked?

Dr. Marshall said, that the number of eggs were not more than would be laid by one queen, but the manner in which they were deposited indicated the work of a plurality of fertile workers.

Judge Andrews said, that he had seen six workers laying eggs in one comb, at the same time.

Can we know when a hive is infested with fertile workers without opening it, was asked?

Dr. Howard said, that the appearance of dwarfed drones was evidence. Judge Andrews said, that unfertilized laying queens would produce dwarfed drones the same as fertile workers would.

It was asked, "Is there any difference in the appearance of the eggs of a fertile workers and those of fertile queens?"

Dr. Howard said, there was no difference, except that the workers deposited a multitude of eggs in one cell, and that often without changing her position; and again, they are attached carelessly along the cell-walls from extremity to base.

What is the best method to get rid of fertile workers, was asked by Judge Goodner?

Dr. Marshall said, give the colony a fertile queen. Judge Andrews approved the Doctor's plan, but preferred to give small quantities of young worker brood, at short intervals, and a young queen will soon succeed the worker pests.

Horace Welch, of Marion county, asked how long worker-bees live? Judge Andrews said they live 75 days in this latitude, the average life.

Will it pay to plant here, for honey, asked by Dr. Marshall? This was considered, by the convention, an important subject, and deserved our best attention; but as the secretary announced that an essay upon this subject was soon to be read, the matter was dropped.

Then came the question, by E. P. Massey, of Waco, will bees do as well in dense shade as they will where the sun reaches them most of the day?

Judge Andrews said, that the question embodied the extremes, that in the sun would be preferable in the early part of the season, and shade during July, August and September; that he preferred the sun to shine upon the hive till 9 o'clock a. m. and after 4 o'clock p. m.

What one fact, if generally known, would advance the cause of bee-culture more than any other, not now so known, was asked by Judge Andrews?

Dr. Howard said, that one of the greatest stumbling stones was the common idea that "bees work for nothing and board themselves."

Dr. Marshall thought that if the masses could be taught that honey is purely a wholesome and health-giving diet, while the fine, extravagantly high-priced syrups of to-day are a chemical compound, contaminated with glucose, which is daily undermining the health of the people; that the demand for pure honey would so exceed the supply, that many more persons capable of cultivating bees, would be induced to fall into our ranks.

Judge Andrews thought that the greatest drawback to the growth of this great source of wealth, health and pleasure, is the fear of the *sting;* that if the people could be taught that by the judicious use of the "smoker" the cause for this palsying horror can be banished forever, that thousands of the brightest sons and daughters of Adam, that are now out in the cold world, would be brought happily into our fold.

Mr. W. T. Pryor, of Farmersville, wished to know the proper time to transfer bees from box hives. Mr. W. R. Graham, of Greenville, answered, "Whenever you find them in box hives."

Dr. Howard said, "Bro. Graham, you handle that subject most admirably."

Dr. Marshall said that during fruit-bloom was the time usually chosen, and he thought there were many good reasons for it.

The president appointed W. K. Marshall, G. R. Cooper and T. C. Goodner committee on resolutions, and W. R. Howard, H. Pearce and E. M. Wise committee on apiarian supplies and exhibits.

Adjourned till 9 o'clock, second day.

MORNING SESSION—SECOND DAY.

Dr. Marshall read an essay on "Extracted honey."

[Will send essay on when I get a transcript.—*Sec.*]

H. Welch asked, "When bees gather pollen are they likely gathering honey?"

Dr. Howard responded that many plants yield pollen when there is no honey to be gathered; not being secreted by the flowers, at such times the bees gather pollen alone.

H. Pearce asked, "Is a superabundance of pollen in a hive, in the spring, detrimental to bees?"

Judge Andrews replied, that there is no such thing as superabundance of pollen, in the South.

Judge Goodner asked, "Do any benefits accrue from natural swarming that cannot be secured by artificial swarming or dividing?"

Dr. Marshall said, that he had increased successfully by dividing, but that when the production of honey is the object, natural swarming is preferable; division is often attended with losses that ordinary foresight would not anticipate.

Judge Andrews said, that there were thrift and vigor attending natural swarming that could not be had in dividing; a new swarm does a land-office business; artificial swarms never get ready for our harvest, the horse-mint; they do not have just such a point in the North.

Mr. A. R. White, of Dallas county, inquired, "Can horsemint be cultivated here with profit?"

Dr. Howard said, that it could be cultivated with the greatest ease, but, thought it would hardly pay in this country to do more than scatter the seed on waste land.

W. R. Graham gave some interesting experiments in planting horse-mint for honey.

Judge Goodner asked, whether settlement and cultivation of our prairies tend to decrease our honey resources?

The discussion here took a wide range with some difference of opinion, but the prevailing opinion was, that our volunteer resources are decreased by reducing our prairies to cultivation.

Convention adjourned till 2 o'clock p. m.

SECOND DAY—AFTERNOON SESSION

The secretary read an essay from Dr. J. P. H. Brown, of Augusta, Ga., on "Marketing honey."

Dr. Howard read his essay on "Honey plants in Northern Texas."

Judge Andrews read an essay on the "Bee-moth," which excited considerable attention and discussion, and also some feeling.

Dr. Howard read his essay on the "Queen bee—her nature and habits."

Judge Andrews, being called out, stated how, by accident, a few years ago, he made the discovery which led to the fact mentioned in Dr. Howard's essay that, "The queen must become tranqualized with the bees instead of the bees with the queen," and that the workers will receive a dozen queens as readily as one; in other words, if we cage a number of queens in one colony at the same time, we may liberate any one of them as though she were the only one there, the reigning queen being present up to the time of the liberation.

The election of officers for the next year resulted in the election of W. H. Andrews, of McKinney, President; W. K. Marshall, of Marshall, Vice-President; W. R. Howard, of Kingston, Secretary; E. M. Wise, of Waxahachie, Treasurer.

W. H. Andrews was elected to represent the Texas association in the convention of the North American Bee-Keepers' Society at Toronto, Canada, next October.

The committee on exhibits reported a large number of all kinds of bee-keepers' supplies, honey and bees.

Resolutions were passed, thanking Dr. J. P. H. Brown, of Georgia, and Mr. B. F. Carroll, of Dresden, Texas, for their essays; and to Judge Andrews and the citizens of McKinney, for hospitality, etc.

After which the convention adjourned to meet in McKinney, Collin county, on Thursday, April 24, 1884.

W. R. HOWARD, *Sec.*

For the American Bee Journal.

The Standard Langstroth Frame.

G. M. ALVES.

Mr. Heddon admits (page 224), that the majority of hive makers, and (page 272), that the largest of them make the Langstroth frame 17⅝ inches long, but at the same time denies (page 272), that the majority of Langstroth frames in use is of that length. Now in view of these facts, we must conclude that Mr. Heddon is driven to the position, that bee-keepers make their own hives and frames, and that those made by our manufactories do not represent those used by our bee-keepers. Is such a position tenable?

Mr. Heddon in substance makes this declaration—that even though the large majority of bee-keepers use a frame 17⅝ inches and call it the standard Langstroth, that though the largest manufactories and the greatest number of them make that size and call it the standard Langstroth—that though our best authorities, the editors of our bee periodicals, and even Mr. Langstroth himself, declare this size to be the standard Langstroth—that though all of these be facts, still they have no weight in deciding the question.

Certainly, if there are any meanings to words, they must be those attached to them by the sovereignty of popular and authoritative usage.

Mr. Heddon objects to the fact of a frame 17⅝ inches in length, taking eight standard one-pound sections, being used as an argument for that length as the standard.

He surely should not object to this length because it will do so, as by reason of this fact, it will suit a large number who prefer to take their honey in broad frames—a fact which was doubtless the chief reason for the change to 17⅝ inches as the standard.

Mr. Heddon says Mr. Langstroth wrote a book in which he gave 17⅜, and until he writes another and gives 17⅝, he will insist on the former. Yet he admits Mr. Langstroth has since given his preference for the latter in a prominent periodical. Does Mr. Heddon hold that it is necessary to write a book in order to maintain or establish a preference?

By reference to Mr. Langstroth's work (page 331 of last edition), it will be seen that he "prefers" a given size hive, and adds: "Mr. Quinby prefers to make my frames longer and deeper." It will thus be seen in his book that he was not particular as to the precise and exact shape, but in general, undoubtedly thought best of frames or hives that approximated his; and hence when a frame was afterwards submitted to him ¼ of an inch longer, and which would afford advantages not given by his, he cheerfully and unhesitatingly gave it his preference.

If Mr. Heddon will call his frame the old Langstroth, or the twenty-years-ago Langstroth, or the obsolete Langstroth, we will acquiesce, but we cannot submit to its being called the present Langstroth, or the standard Langstroth.

We maintain that the standard Langstroth is ¼ inch longer. That it is so taken and accepted by Mr. Langstroth; by the editors of the prominent bee papers; by the large majority of bee-keepers, and by the largest manufacturies, and the greatest number of them. We also maintain that the addition of the ¼ of an inch is a decided advantage, as it subserves an important use that the obsolete frame does not.

I am unable to see that I can make our case any stronger than I have done in this and my previous article, and submit the subject to the candid and informed readers of the BEE JOURNAL. In dropping the subject, I wish to say to Mr. Heddon, that I am always interested in and instructed by his articles, and regret to find him "off" on so important a subject as the "Standard Langstroth Frame."

Henderson, Ky., May 31, 1883.

For the American Bee Journal.

The Weather in Illinois.

S. A. SHUCK.

Mr. Doolittle says (May 17), "It freezes nearly every night," and Mr. Heddon says (May 22), "It snows yet, but still it is not winter."

Although we are situated much south of Messrs. Heddon and Doolittle, we have but little if any better weather than they have. On the morning of the 22d, we had a very heavy frost, and codsiderable ice. Corn, potatoes, and, in fact, everything green showed the effects of Jack Frost; and this is not all, the weather continues cloudy, wet and cool; on the 27th it was partly clear, but cool; on the 28th it rained all day; on the 29th it was mostly clear; temperature 70°. It was a pleasant day. To-day it rained hard from 5:30 a. m. to 1 p. m.

Mr. Heddon says, "Bees were never so weak and poor in stores, at this date, in my apiary." He will please remember the reply he gave my report, last fall. As I judge, from his present report, that his bees are in a very similar condition to that of mine a year ago; however, I sympathize with him, and it is most discouraging, indeed, to have all our bees in such a deplorable condition just at the time when we want them in the best condition.

My bees are as honeyless as they were a year ago to-day, but they are very strong in numbers. I shall feed some 30 pounds of sugar this evening. White clover is blooming sufficiently to support the bees, if they could get out. The prospects from white clover and basswood are equally as good, if not better, than at this time in 1882. Red clover, which, on account of being winter-killed, did not bloom in the forepart of last season, promises finely at present. Our bees have always worked on the first crop.

Bryant, Ill., May 30, 1883.

For the American Bee Journal.

Southern vs. Northern-Bred Queens.

A. B. WEED.

The subject of Southern vs. Northern-bred queens, which is just now receiving the attention, is an important one, or, at least, it will become so if there is shown to be foundation for controversy. It is commonly held that an animal succeeds best in the exercise of its powers, if kept in the locality where it was bred, because it is combated by no adverse climatic influence. This theory seems to be a very reasonable one, but it would be well to look at such facts as we may have which bear on the case.

In late numbers of the BEE JOURNAL, we have had reports of some Southern-bred queens which com- in the North. These latter state- pared unfavorably with those reared ments can hardly be said to prove anything, as the queens in question died before their first winter in their new home, and so were not put to the test of cold weather. Their untimely failing must have been caused by something else than climatic influence. I have known queens bred in the North to do the same. On the other hand, I have had queens from Georgia which were unexceptionable in every respect.

The charge of inability to stand our severe winters, must apply with equal force to queens coming from Italy; while for other reasons I prefer home-bred queens, I believe that this complaint has never been made of imported ones.

If it is a fact that Southern-bred queens are inferior to those reared in the North, the result will be an injury to the business of Southern breeders, and a loss to Northern apiarists who wish to buy early queens.

I cannot speak of the BEE JOURNAL except in praise; the avidity with it seizes new subjects, and the ability with which it discussed them, makes it invaluable to those who would keep up with the times.

Detroit, Mich., May 21, 1883.

For the American Bee Journal.

Bee-Keeping in Canada.

JAMES SHANNON.

I have been interested in bee-culture for a number of years, but like many others, was content with the old box-hive and the old methods, and the result was a limited supply of honey for home consumption, and sometimes a little to spare. But about three years ago my attention was accidentally called to the sientific methods of bee-culture, and I at once became an enthusiast in the business, and went to work in good earnest to learn the principles of this pleasing occupation. While studying, I have been practicing, thus demonstrating the advantages or difficulties of different methods. After reading the standard works on bee-culture, I subscribed for the BEE JOURNAL, which has been a welcome visitor every week since.

I have wintered 7 colonies, 6 of which are in excellent condition, but one has dwindled badly. The weather here has been very cold and backward since the winter protection was removed. I think they should have remained in winter quarters until now. It seems to me that double-walled hives are almost a necessity to provide against this lingering cold in the spring, which so often prevails here; until this date, and even after, cold waves that greatly retard operations in the hive unless they have almost winter protection. I am experimenting in this matter. I have been greatly interested in the discussions about the coming bee. Surely, we should be as wise as the old patriarch who cared not whether his cattle were ring streaked, speckled or spotted; and, if we can bring out the good points by careful breeding, none need care about color or bands. I am trying to unite two valuable traits in my bees; one part are superior honey-gatherers; the others, having a slight dash of Cyprian blood, have shown remarkable powers of building up. The only difficulty I have is the nearness of other bees.

I have sown 12 pounds of Bokhara clover, this spring, and intend trying other plants, believing pasturage to be a necessity. We have, however, good natural pasturage consisting of white clover, abundance of raspberries, and some basswood and golden-rod, and other plants upon which the the bees work vigorously.

There is a growing interest in bee-culture here, and a good demand for colonies. I hope to report progress, from time to time, with the result of my experiments.

Wolverton, Ont., May 15, 1883.

For the American Bee Journal.

How I Get Bees into the Sections.

W. H. BALCH.

Years ago it used to be a hard job, sometimes, with some colonies of bees, even when all seemed propitious; while others, no stronger in numbers, were working with a will in sections, these would lay around for several days. Now, as soon as I get the hive filled with brood, I begin to open or ventilate the hives as fast as the bees will bear it and not chill the brood; I open the entrances a little each day, turn back the quilt, a little at a time, and soon. When the honey begins to come in, put on the sections, close all ventilation and the entrances as small as not to hinder them working. The hive is not cooled so much but that they have some bees to spare, and these will immediately go into the sections and begin work. Have one or more sections filled with natural comb, or foundation that was drawn out the previous year, and if you do not care for very much increase, watch the sections, and as soon as the first are filled, take them off and replace with empty ones; as the bees increase, give more ventilation. In this way I have prevented one-third of my bees, in a good honey season, from swarming; and many that did swarm, swarmed but once, and those that did not swarm, averaged a little over 300 pounds per colony, of honey in the comb.

Oran, N. Y., May 24, 1883.

For the American Bee Journal.

How to Make Out Reports.

W. H. STEWART.

There seems to be a general desire expressed by leading bee-keepers to collect and publish full and reliable statistics on bees and honey. Bee-keepers can never know their relative standing with other producing classes until they can obtain such statistics. To us it seems impossible to get a full and correct statement of our condition, products and prospects in any other way than to first get a full and correct report from each individual engaged in the business.

To do this, under the present condition of affairs, is no small matter. If each bee-keeper was taking a bee paper, and was able and ready to make out a full and correct report each year, then a committee could, by comparing those papers, approximate very nearly to the truth. But, unfortunately there are many bee-keepers who do not take a bee paper, or even take the trouble to borrow one to read; therefore, they cannot be expected to report; hence, it would have to be the business of some other person to pump a report from such men, and report for them.

It appears to be useless to depend upon assessors to gather these statistics, from the fact that in some States no account is taken of bees in the assessment. Again, if assessors and town boards should undertake to collect and report the full and correct condition of bee-culture in their respective towns, not one in one hundred of such officers know anything of bee-culture, and, consequently, could neither frame, ask or answer an important question on the subject.

There is yet another impediment in the way of getting even a correct report from those that do take and read bee literature. Many get a good crop of honey, and seem to be so overjoyed that they rush into print with the report, not stopping to ascertain at the year's end, whether or not bee-keeping has paid, all things considered. Others get discouraged when the year is, perhaps, half-passed, and report their discouragements, and then, may be, we hear no more from them. Others seem to be ambitious to excel in making outward show, and they double up as many bees as can be made to work together, and then take all their stores, and leave the bees to perish for the sake of reporting big yields from one colony, and, perhaps, a fair, aggregate report would show that the same man is losing money on his bees, all things considered. Others report good and honest as far as they go, but their reports not being full, are of but little value.

Allow me to give some examples of reports, and my reasons for thinking that such reports are in the end worthless. First, let me say that what I write on bee-cultute, is only calculated for this northern latitude. Even in this region of long, cold winters, almost any one can manage bees safely and profitably through the summer seasons, but then comes the winters, during which the law of natural selection proves that the only road to successful bee-keeping is a well-arranged and closely-followed system deduced from reason, observation and experience.

To be useful, a report should embrace an experience for at least one whole year; not only so, but that year should begin and end at such dates, that we could learn from it what effect such and such management, through the spring, summer and fall had on the bees during the winter, and the manner they were wintered. I believe that all well-posted bee-keepers are agreed that if we begin in the spring with two colonies of bees in equal condition, and from one take all the early honey, leaving only the late, unripe and inferior honey for winter stores, and give the other well-ripened and capped basswood or clover honey for winter food, the condition of the two colonies, in the spring, would be far different, whether out-door or cellar wintering were tried.

But to the reports. In the Bee Journal, page 59, Mr. H. Cripe reports as follows, under date Jan. 18, 1883: "Last spring I had 4 colonies of Italian bees (two strong and two very weak), they increased to 10 strong colonies, by natural swarming. The increase all came from 2 colonies, and I took 120 pounds of comb honey from them. I could have taken a quantity of extracted, but I had no extractor, so I thought I would keep it for spring feeding. After the honey season was over, I sold 2 colonies and bought 16 Italians and hybrids in Simplicity hives. * * * I packed 10 in sawdust and 6 in chaff; the other 8 I put in the cellar. They are all alive (Jan. 18), but I cannot tell how they will come out. * * We have had a solid winter since Nov. 23."

Now, in giving the above report, we wish to cast no slir, or find any fault with Mr. C., but we want all to see how reports could be made of lasting good. He says on Jan. 18, "all are alive, but I do not know how they will come out." If this report had been held until next June, he could have told us how they came out; but as it is, we will not be likely to ever know how they came out, and even if he tells us next spring, then we must find this report and compare it with the spring report (which course is not as yet being pursued, that I know of); and even if we compare the two reports, this one, at least, does not tell whether the 2 Italian colonies that gave 6 swarms were the two that he sold, or whether they are packed in sawdust, or in chaff, or in the cellar, or whether the cellar is under his dwelling, where the light is often carried, or whether the cellar is made in a sand-bank expressly for bee-wintering, and how ventilated, what kind of hives the first 4 colonies were in, what kind of hives he put the 6 swarms in, and whether the 6 were out or indoors. Will Mr. C. please report in this month and finish out what he has begun in the above partial report.

In another report by Mr. D. H. Hopkins, the same page, gives us to understand about how he managed his bees last summer, and that on Jan. 9, they were all very quiet in the cellar, with no dead bees on the floor, but that there were more than a bushel of dead bees on the floor the year before at the same date.

Now, if Mr. H. had told us how he managed his bees through the summer of 1881, then we might, perhaps, figure out the reason why bees, in the same hives and same cellar (we infer that they were the same) should winter so differently in two different winters. The management through the summer, and mortality the following winter, should have been given in a report by itself; and in the spring the summer management and wintering that followed should be given, then the two reports could be compared, and the results deduced therefrom.

In the report of the New Jersey and Eastern Convention, on page 10 of the Bee Journal, it will be noticed by Mr. King's remarks, that it was the next thing to impossible to get any reliable statistics on bee culture. Again, on page 772 of the Bee Journal for 1882, in the remarks by the editor of *Bee-Keepers' Magazine*, he says that no reliance whatever could be placed on certain statistics, that he had found eminating from the Department at Washington; and in his closing remarks, *urges* the necessity of some plan which shall give accurately the facts, and so enable beginners to enter on the business understandingly. I am of the opinion that it would be a good plan for our editors to furnish their patrons with printed blank reports about May 1, requesting the bee-keepers to fill out by answering the following questions, or a similar list of questions could be arranged by the editors counseling together:

1. How many colonies on May 1, 1883?
2. What strain of bees?
3. In what condition?
4. In what kind of hives?
5. What is your locality?
6. How did you manage them through the month of May?
7. How through June?
8. How through July?
9. How through August?
10. How through September?
11. How through October?
12. How did you prepare them for winter in November, and what kind of stores, and how much surplus through the season?
13. How did they appear to do through each winter months?
14. If in cellar or clamps, on what date did you set them on summer stands in the spring of 1884?
15. How did they do from the time set out until May 1, 1884?

It seems to us that a tolerable good and reliable system of management could be deduced from a few years' report as above, but that one-half or one-third of the reports made at random, will result in very little good.

Orion, Wis.

For the American Bee Journal.

Essentials of a Standard Frame.

J. W. PORTER.

Replying to Dr. E. B. Southwick's letter, on page 263, as an advocate of the Langstroth frame, I would state the reasons why very many have adopted it, above all other frames:

1. It affords a very much larger surface on top, than any deep frame. The largest surface for comb honey on top is the main point, for many of us have no success in side-storing. It favors the internal economy of the hive, inasmuch as bees can reach their stores sooner by climbing a less distance, in the many thousands of loads daily carried in.

2. The same superiority is claimed for extracting from the second story, over deep frames.

3. It disturbs the bees far less, to draw up from a hive the frames filled with honey or brood, nine inches deep, than twelve inches deep.

4. If queen-cells are formed, they are less liable to accidents.

5. In case of a slight deviation from the perpendicular in setting the hive, there is less danger of the combs being fastened to the sides.

So much has the first points been esteemed, that many efforts have been made to carry it still further and make the frames less deep, but it appears that the standard Langstroth frame is a sort of happy-medium between the two extremes of shallow and deep frames.

That it sufficiently meets the requirements for concentrating the cluster in winter and spring is clear, judging by the great success of the army of bee-keepers who use it. It will be admitted by most of the apiarists, I doubt not, that the square frame, "American" or "Gallup," has advantages for winter-clustering, but we claim not enough to compensate for the reduced superficies on the top of the brood.

Where are the returns from such that can equal the reports we have from those using the Langstroth frame? Mr. Doolittle comes the nearest to it, but I forget the dimensions of his frame. But he has been greatly surpassed, as the records show. While it is my practice to confine frequently to eight Langstroth frames, for comb honey, I wish the space for ten frames above, and have it by inserting dummies below, on each side. Even then I have to tier up, in "the season," the honey racks. Having used both kinds, I have given such reasons as my own experience suggests.

Charlottsville, Va., May 24, 1883.

BOOK CLUBBING LIST.

We will supply the **American Bee Journal** one year, and any of the following Books, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
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The Monthly Bee Journal and any of the above, $1 less than the figures in the last column.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Letting Out Bees on Shares.

1. When bees are let out on shares, what are the conditions of the contract?
2. Who furnishes the new hives necessary for the increase?
3. Does the renter furnish all appliances for preparing the honey for market, or for only his share?
4. For what length of time are they generally let out for?

Mr. Heddon will confer a favor by answering the above through the "What and How" department of the BEE JOURNAL. As a rule, the bees wintered well in this county (Clinton).

HERBERT R. THOMAS.
Clarksville, O.

ANSWERS.—The "Bees on Shares" question, is one that I have studied considerably. In answering the above, I do so with a prejudice in favor of the laborer vs. the capitalist, a principle herein involved, though on ever so small a scale. Here are two facts:

1. Bees are to some considerable extent a risky property; their life and the amount of their stores being an unknown quantity. One should have a larger per cent. of income from such property, by three or four fold, than from a good, safe real estate mortgage.

2. On the other hand, the laborer should have an average income in advance of the "going wages." All this can be realized from the manipulation of bees, provided the bees are in proper hives, in a good location, and the work done by a faithful and learned man, and directed by experience and tact.

I will lay down the following terms as those which seem to me the nearest to being just, and the best adapted to both parties.

The one owning the bees shall furnish the place to establish the apiary. He shall furnish all the fixtures in ever respect. The laborer shall furnish himself nothing more.

The laziest tramp can turn and mend,
And be a man "for a' that."

The capitalist furnishes bees, apiary, tools, new hives for increase, comb foundation for surplus and brood departments, in full sheets; sections, shipping crates and everything, including his riper experience (which, it is supposable, he possesses). He shall have the diction of the general plan of management, while the rentor does all the work, and is dictator of the detail manipulation. The division shall be as follows: Each party shall have one-half of the surplus honey, and when it is sold, each one shall pay one-half of the cost of sections, shipping crates and surplus comb foundation that is sold with that season's crop. The capitalist shall have diction over the whole crop, merely dividing the money for the same, unless the laborer give security for the payment of his half of the sections, foundation and crates, when the honey may be divided, and each sell his own as he chooses. The bees should be managed for securing the greatest amount of surplus possible, and discouraged from swarming, all that such management tends to do, but when they do swarm, they are to be hived and managed as are the old colonies. The increase belongs to the apiary, always; and any system that gives a share of the increase to the laborer, will defeat itself, and prove in the end damaging to both parties. The old system of half the honey and half the increase, and the lessee or laborer furnish everything, is illy adopted to modern apiculture, and would give the capitalist "the lion's share." Of course the surplus from the increase is divided equally, the same as that from the old colonies. All the reasons for settling on the above terms as the nearest just and best, all around, are too many for the room I wish to occupy now.

Foundation in Frames and Sections.

1. How full should frames and sections be filled with foundation?
2. Should the foundation in frames be fastened only at the top? I have been in the habit of fastening it in frames and sections only at the top, and leaving ⅜ to ½ inch space at the sides and bottom.
3. Would it do to fill the sections so full of foundation that bees could not pass through?
4. How soon, after the brood has been chilled, can it be detected by an amateur, and how?
5. In taking frames of brood from strong colonies to build up weak ones, should the adhering bees be shaken off, or could they be safely put in, bees and all, by smoking or confusing the weak colonies?

Bees in this vicinty are doing well. A neighbor has had one swarm come off already, and reports other colonies liable to cast swarms soon. Prospects are good for an abundant honey flow from white clover. J. M. BURTCH.
Morrison, Ill., May 23, 1883.

ANSWERS.—1. In filling the brood frames I leave a space of ⅛ to ¼ inch at the ends, and about ⅜ at the bottom. In one-pound sections I leave about ⅛ at the sides, and ¼ to ⅜ at the bottom.

2. I fasten my foundation to the top bar, and on to the wires woven vertically, eight in each Langstroth frame. I think you have had success with sections, but needed wires in the brood frames.

3. As far as the passage of the bees is concerned, I would not care for any run-way at the sides, only at the bottom, but I do not get as straight combs when the piece of foundation is fastened to the sides of the sections.

4. I have never had any chilled brood that I remember of. I think it will turn brownish a few hours after chilling.

5. I do not approve, as a general thing, of such exchanging at all; but where I do it, I shake off all the adhering bees and put in only brood about ready to emerge from the cells. *Sometimes* very young bees will kill a strange queen, and that, too, after much precaution.

SELECTIONS FROM OUR LETTER BOX

Bloom Promises Well and Fruit is Safe.

Here, in Belmont county, O., we have escaped the late terrible weather, with the exception of a few light frosts and 3 or 4 days of cool, cloudy, wet weather, which was pretty trying on the bees. The white clover and locust bloom promise well, and the fruit is still safe, as far as I have noticed. R. M. DENHAM.
St. Clairsville, O., May 24, 1883.

Bee and Honey Show in Kentucky.

After a long silence as a correspondent to the BEE JOURNAL, I again pen a few lines. Our prospects for white clover honey was never better. Bees were storing honey and breeding comb up to May 19, when we had a big rain storm from the northwest, turning cold after the rain, with a severe blow for 48 hours. It was a cold blast, making us shiver with cold, and our bees could not get out, even for water. My apiary is in the best condition possible, and with one of Pelham's foundation machines, we are making beautiful foundation. We have the very finest of Italian bees, and the clover is very nice. Bees are beginning to build comb and store honey. Mr. Craycraft, of Salem, Ind., has my bees in charge, and we shall run them for both comb and extracted honey. Mr. Craycraft is well posted in scientific bee-culture, and is working my bees in a very satisfactory manner. Our State Society meets in Louisville next fall, and we want to make as fine a display of bees, honey and bee-fixtures as possible. We hope honey producers and manufacturers of supplies (who will take an interest in the show) will write us what they desire to exhibit, so that we can secure space in the Industrial Exposition, which opens Aug. 1 and closes Nov. 1. As secretary of Kentucky State Bee-Keepers' Association, I will do all I can to make the exhibit a success. Every bee-keeper in Kentucky ought to have something on exhibition, and bee-keepers and manufacturers in other States are invited to help us. N. P. ALLEN.

Smith's Grove, Ky., May 23, 1883.

Cyprians, Motherwort, etc.

I have 53 colonies of bees; one being a Cyprian, which gives the most honey, and are as gentle as any other bee. I have not been stung by them yet, and I have had them nearly a year. A friend of mine says, "Give me Cyprians after this;" some say that Cyprians are hard to manage, but I cannot see it. Motherwort grows very easily. I have some of it, and will plant it all the time, as it blooms always; as fast as the old stock dies down, younger ones take its place, and I think it worth planting. It can be planted any place, or along the fences. G. E. SONNEMANN.

New Iberia, La., May 25, 1883.

Fruit Trees Blooming.

My bees have wintered very well. I only had 49 colonies in the fall, when put in the cellar; I lost two, by being queenless. We have had a cold spring, and I have had to feed some. Apple blossoms are just out; the first ones opened yesterday, and if it keeps warm, they will strengthen up pretty fast. D. S. MCCALLUM.

Big Creek, N. Y., May 26, 1883.

Bees in Fine Condition.

Our bees are in fine condition. The white clover is very thrifty, and with good weather will be apt to yield well. F. A. SNELL.

Milledgeville, Ill., May 27, 1883.

Prospects Favorable in California.

Our propects are very favorable. We have fine late rains, and the bees are booming. R. STRATHEARN.

Scenega, Cal., May 20, 1883.

Gone to the South.

As frost, ice and cold winds had been the order of the day, up to May 15, I made up my mind to come South at once, and on the 17th inst., I chartered a car to Tullahoma, Tenn., and loaded on 67 colonies of my bees with household goods and started them South. On the 22d inst., with my family, I left Indiana; when we left, it was snowing and cold. We arrived here on the evening of the 23d, and found it pleasant and warm weather. My bees came through in splendid condition. I. R. GOOD.

Tullahoma, Tenn., May 26, 1883.

Prospects Flattering.

The bees are booming and prospects flattering. W. H. STOUT.

Pine Grove, Pa., May 28, 1883.

Destroying the Queen-Cells.

No doubt many have read in the books that when bees are making preparations to swarm, because of unfavorable weather or other causes, the cells will be at once destroyed. This has not always been the case with my bees. I found by experience, that sometimes (though not always) the young queens are allowed to hatch; and when such is the case, the first queen that emerges will destroy the remaing cells, and in a majority of cases, kill the old queen too. As this generally happens when our queens are needed the most, I think it is poor policy to let any capped cells remain in a colony when the conditions for swarming are not favorable. Although when the bees wish to supersede their queen, the young queen will seldom kill her mother; but in swarming, this is not the case; at least such has been my experience. H. J. SCHROCK.

Goshen, Ind., May 29, 1883.

Correction.

In my letter on page 261, the printer, in mistaking the word *rather* in my manuscript for "either," and leaving out a word altogether in another sentence, spoils both. Allow me, therefore, to give the two sentences here as they were written in my manuscript, italicising the two words left out: "But it would be *rather* disingenuous to say that one colony of bees did all this, without giving any explanations. * * * *

Now, please bear in mind, I do *not* wish to impeach the honesty or sincerity of a single correspondent." ALLEN PRINGLE.

Selby, Ont., May 25, 1883.

Swarmed in a Hurry.

I wintered 20 colonies in Langstroth chaff hives. They wintered well, and came out very strong. Henry Alley reccommends raising up the hives, a foot or more from the ground, so that they will not get snowed under. My experience is, that bees will do better if they are under a snow bank, then they would if they were elevated and exposed to the wind and cold. My bees were covered with snow, or nearly so, from the early part of the winter until early in March, then I shoveled out their entrances, and they had a splendid flight, and showed little signs of dysentery. I gave them a thorough examination about April 10, and found from 2 to 4 frames of honey that had not been touched in each hive (I gave them 7 Langstroth frames to start on). On the 26th of this month I lost a large swarm of bees, and as it was a little out of their common way of doing business, I will describe it. The queen was a hybrid, and very prolific. I had taken 4 frames of capped brood from it, to build up nuclei, but the hive was full of bees. I examined the hive the day before the swarm issued, and found several queen-cells started, 3 or 4 containing eggs, but no hatched eggs or larvæ; so I felt sure the bees would not swarm in 7 or 8 days, so I left home at 8 a. m.; the swarm came out at 8:20; I returned at 9:15 a. m., and met the swarm a few rods from home, on their flight to the woods. There was no one to hive them, or I would not have lost them. I examined the hive, after they left, and found no eggs hatched yet, and I do not know how to account for their hurry. Can any reader of the BEE JOURNAL explain it? J. A. MURPHEY.

Sterling Station, N. Y., May 26, 1883.

Dysentery.

I have a colony of bees in my apiary that seem to me to suffer from dysentery, or rather from the fact of being unable to discharge their feces. The hive is surrounded daily, on the ground, with a quivering mass of animated bees, but unable to walk. In the morning they are all dead, and the process is repeated. Their bodies are distended and filled with a large amount of yellow matter. The colony is apparently in fair condition. What is the cause and the remedy? F. C. GASTINGER.

Ada, O., May 31, 1883.

[It is evidently a case of dysentery. It might have been caused by poor honey, or something of that nature. As the summer is now upon us, fine weather and new honey will remedy it all. If they are not gathering honey, give them some good white clover or basswood honey; or if you have none of that, some sugar syrup, made as indicated on page 283.—ED.]

Report for 3 Years.

I have kept bees for about 16 years; all of the time, except the last 3 years, being in Ontario. During all that time I never exceeded more than 25 colonies and 200 pounds of comb honey, once or twice, and thought myself lucky at that. I moved here (Michigan) in March, 1880, bringing with me 2 colonies with dollar queens. I moved them 28 miles from the railroad here on a lumber wagon; still they increased by natural swarming to 10 good colonies, and gave some surplus comb honey. I wintered them on the summer stands, and all came out strong in the spring of 1881; and during that summer they increased to 25, and produced 700 pounds of comb honey. Again they were wintered on the summer stands, with the loss of 2, which I think were queenless, which left me 23 in the spring of 1882. During that summer they increased to 63, besides 7 that left for the woods, and gave me 2,200 pounds of surplus comb honey. I again wintered them on the summer stands, and now May 22, they are reduced to 50 colonies; the past winter, and especially this spring, has been very hard on bees; several of my neighbors have lost heavily. I use the Fisher deep-framed hive, and fill the walls with sawdust. Bees do well here; there seems to be a constant flow of honey from early spring till frost. WM. SHIER.

Marlette, Mich., May 22, 1883.

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Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

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Any one sending us a club of **two** subscribers for 1 year, for the Weekly, with **$4**, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For **three** subscribers, with **$6**, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For **four** subscribers, with **$8**, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For **five** subscribers, with **$10**, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

☞ The Central Kansas Bee-Keepers' Association will meet at Manhattan, Kansas, on June 30, 1883.

THOS. BASSLER, *Sec.*

☞ On page 261, 33d line from top of first column, instead of "following," read "*preceding* seasons."

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies	(120 pages)......	$1 00
" 100 colonies	(220 pages)......	1 50
" 200 colonies	(420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Special Notice.—We will, hereafter, supply the Weekly BEE JOURNAL for one year, and the seventh edition of Prof. Cook's Manual of the Apiary, bound in fine cloth, for **$2.75**, or the Monthly Bee Journal, and the Manual in cloth for $1.75. As this offer will soon be withdrawn, those who desire it should send for the book *at once*.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., June 4, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The nominal price of extracted is 7c. for dark and 9c. for light—here. The supply is abundant and sales are slow.

BEESWAX—None in the market.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY.—The market for extracted honey is lively, and the demand exceeds the arrivals. Our stock is small and we are in danger of having sold out every day. We pay 7@10c. for good honey on arrival, the latter price for choice clover. There is a small demand for comb honey, and prices nominal.

BEESWAX.—Arrivals of beeswax are plentiful. We pay 35c. for a good article on arrival.

CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY.—I sold, of the comb honey crop of 1882, up to the first of January, 1883, nearly 120,000 lbs; since January 1st to April 1st, sales have been slow, and yet 70,000 pounds have been disposed of.

There is, perhaps, a few tons of dark and buckwheat comb honey on this market that will not be consumed before the new crop comes into market.

There has been 3 pounds of comb honey crop of 1882 offered in this market, to one of the crop of 1881.

Extracted honey has aggregated in sales 140,000 pounds. There is, perhaps, a good deal to carry over, yet on the market. Prices since the first of December, 1882, have gradually declined until the present date. At this late hour, holders are anxious to sell; hence prices vary very much.

BEESWAX—35@36c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—Stocks and the demand are both light. More or less difficulty would be experienced in filling a large order for a straight lot.

White comb, 14@17c.; dark to good, 11@13c.; extracted, choice to extra white, 8½@9½c.; dark and candied, 5@7½c.

BEESWAX—Wholesale, 27@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Dull; light jobbing sales only. Comb at 10@14c.—Strained and extracted at 7@7½c.

BEESWAX—Sold lightly at 32@34c.

W. T. ANDERSON & CO., 117 N. Main Street.

CLEVELAND.

HONEY—Stocks of honey are running low with us. 1-lb. sections are all sold and there is a very light inquiry for such; would probably sell at 18@20c. 2-lb. sections are not in demand, and no sales to quote, asking 17@18c. Extracted no sale at 9@10c.

BEESWAX—Not offering.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—Our supply is gone; we have none to quote.

CROCKER & BLAKE, 57 Chatham Street.

☞ Do not send coins in a letter. It is dangerous and increases the postage unnecessarily. Always send postage stamps, for fractions of a dollar, and, if you can get them—*one-cent* stamps; if not, any denomination of postage stamps will do.

☞ Do not let your numbers of the BEE JOURNAL for 1882 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

Bingham Smoker Corner.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent post-paid for **$1.75.** Address,

BINGHAM & HETHERINGTON,
Abronia Mich.

All Excelling. — Messrs. Bingham & Hetherington, Dear Sirs:—I am now selling your Smokers almost exclusively. You are excelling yourselves in smokers all the time.
Respectfully, J. G. TAYLOR.
Austin, Texas, May 10, 1883.

Cyprians Conquered.

All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's "Conqueror Smoker" did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham.
G. M. DOOLITTLE.
Borodino, N. Y., Aug. 15, 1882.

During the following three months, Bingham Smokers will be sent post-paid, per mail, on receipt of the following prices:

The "Doctor"..	(wide shield)—3½	in. fire tube,	$2.00
The Conqueror	(wide shield)—3	in. fire tube,	1.75
Large	(wide shield)—2½	in. fire tube,	1.50
Extra	(wide shield)—2	in. fire tube,	1.25
Plain	(nar. shield)—2	in. fire tube,	1.00
Little Wonder..	(nar. shield)—1¾	in. fire tube,	.65
Bingham & Hetherington Uncapping Knife..			1.15

With thanks for letters of encouragement, and the absence of complaining ones, we tender to our thirty-five thousand patrons our best wishes.
Very Respectfully Yours,
BINGHAM & HETHERINGTON.
Abronia, Mich., June 1, 1883.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

Friends, if you are in any way interested in

BEES OR HONEY

We will with pleasure send you a sample copy of the **Monthly Gleanings in Bee-Culture**, with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes**, all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly*, to
Ctf A. I. ROOT, Medina, O.

HEADQUARTERS IN THE SOUTH

For the manufacture of
BEE-KEEPERS' SUPPLIES.
Dunham and Root Foundation a specialty.
Italian Queens and Bees from March to November.
☞ Send for my Illustrated Catalogue.
5Ctf **PAUL L. VIALLON**, Bayou Goula, La.

The Bee-Keepers' Guide,

OR, MANUAL OF THE APIARY.

9,000 SOLD IN SIX YEARS.

10th Thousand Just Out.

More than 50 pages, and more than 50 fine illustrations added. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. **Price, by Mail, $1.25.**

Liberal discount to dealers and to clubs.

A. J. COOK,
17Ctf Author and Publisher, Lansing, Mich.

HOLY LAND QUEENS.

Untested, ready about June 10. Single Queen, in this month, $1.25; six or more, $1.00 each; no tested Queens, this month.
I. R. GOOD, TULLAHOMA, Coffee Co., TENN.
23A4w

1883. **1883.**
YOU GET VALUE RECEIVED!

QUEENS, BEES AND SUPPLIES

If you want **EARLY QUEENS** from the best improved **genuine** stock for business; or if you want Imported Italian Queens or bees, in full colonies or nuclei, with tested or untested queens; if you want Dunham or Vandervort comb foundation, made from **pure** beeswax; or if you want hives or apiarian supplies of any kind, send for my new catalogue. It tells you about introducing queens, new "Races of Bees," etc. Cash paid for clean beeswax. Address,
J. P. H. BROWN,
5BD15t Augusta, Georgia.

1883. JOSEPH D. ENAS, 1883.
(Sunny Side Apiary,)

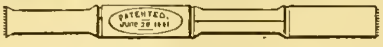
Pure Italian Queens, Bees, Colonies, Nuclei,

EXTRACTORS, COMB FOUNDATION, &c
19D6m Address, Sunny Side Apiary, NAPA, CAL.

W. Z. HUTCHINSON,

Rogersville, Genesee County, Mich.,
is now receiving Italian Queens from the South (for particulars see advertisement in the BEE JOURNAL of April 18), and can send them by return mail at the following prices: Before June 1st, untested queens will be $1.50 each: during June, single queen $1.25, or six for $6.00; after July 1st, single queen $1.00, six for $5.50, twelve for $10.00. Tested queens (reared last season in the home apiary), before June 1st, $3.00 each; during June, $2.50 each; after July 1st, $2.00 each. Safe arrival guaranteed. Make money orders payable at Flint, Mich. 17eow tf

SECTIONS.



We have just put in several new machines and also a larger engine in our factory, consequently we are in better shape to fill orders than ever for Sections, Shipping Crates, etc., etc. We make a specialty of our

"BOSS" ONE-PIECE SECTIONS,

Patented June 28th, 1881.

We can make the "Boss" One-Piece Sections any size or width desired. Send for Price List.

We make the Half-Pound Section any size desired.

JAS. FORNCROOK & CO.
1BCtf Watertown Jeff. Co. Wis., Jan. 1, 1883.

PLYMOUTH ROCKS

Iroquois Strain. Four Yards.

Correspondence cheerfully answered Prices reasonable
W. H. BUSSEY, 131 Lake Street, Chicago.
2BC1y

E. T. LEWIS & CO., Toledo, Ohio,

Manufacturers of the U. S. STANDARD Honey Extractor (new improvements), and all other Apiarian Supplies. Send for circular. 17A 5Btf

1883. **1883.**

ITALIAN QUEENS.

I am now booking orders for queens. I cull my queens as they hatch, is the reason my customers were so well pleased last year.

Send me your address on a postal, and get circular.
Six Queens for $5.00.
J. T. WILSON,
Mortonsville, Woodford Co., Ky.
6BCtf

PURE ITALIAN BEES AND QUEENS,

Tested and untested Queens, nuclei in Langstroth size frames, full colonies, queens by the half dozen, bees by the pound. Send for prices and particulars. A. B. MILLER & SON,
44Atf Wakarusa, Elkhart Co., Ind.

QUEENS!

During June and July, I shall be prepared to furnish the CHOICEST OF QUEENS, both tested and untested, from two different strains. 1. From my new strain, viz: a cross between the Brown, German, and dark leather-colored Italian. 2. Pure Italians reared from imported mothers. With my hives of all worker combs, using drone comb where I desire it only, isolated from other apiaries, I have the best of opportunities to control the mating of my Queens. I rear Queens under the swarming impulse only, and upon the true plan of getting the best and most vigorous stock. All orders filled in turn, and it is useless to hurry us.

PRICES:

Tested Queens (all selected) each,........	$ 3.00
Untested before July 1, each,...............	1.50
Uuntested after July 1, each,...............	1.00

These are bottom prices in any quantity. Send for descriptive Catalogue to

JAMES HEDDON, Dowagiac, Mich.

☞ I cannot supply any more COMB FOUNDATION during 1883; my stock is exhausted. ☜

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,
Langstroth Bee Hives, Honey Sections, etc.
Apply to **C. F. MUTH,**
976 and 978 Central Ave., **CINCINNATI, O.**
☞ Send 10c. for Practical Hints to Bee-Keepers.

65 *ENGRAVINGS.*

THE HORSE,

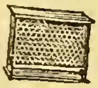
BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of receipts, and much valuable information.
Price 25 cents.—Sent on receipt of price, by
THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

$72 A week made at home by the industrious. Best business now before the public. Capital not needed We will start you. Men, women, boys and girls wanted everywhere to work for us. Now is the time. You can work in spare time, or give your whole time to the business. No other business will pay you nearly as well. No one can fail to make enormous pay, by engaging at once. Costly outfit and terms free. Money made fast, easily and honorably. Address TRUE & Co., Augusta, Maine. 8A1y

FLAT - BOTTOM

COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free.
J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

Given's Foundation Press.

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.
D. S. GIVEN & CO.,
1ABtf HOOPESTON, ILL.

CHEAP! CHEAP!

LANGSTROTH HIVES!
SIMPLICITY HIVES!

All kinds of hives and surplus comb foundation, etc., etc. Having superior advantages for the manufacturing of hives and of procuring lumber low, I can furnish very low rates.
Send for descriptive circular.
A. D. BENHAM,
10Atf Olivet, Mich.

OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

VOL. XIX. CHICAGO, ILL., JUNE 13, 1883. No. 24.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

European Honey & Wax Importation.

Some time ago we noticed an item in an English paper that, at a sale in Lisbon, Portugal, *sixty tons* of beeswax had been sold. This shows what an extensive sale and use it has in Europe.

The *Deutscher Bienenfreund* for May contains a table showing the amount of honey and beeswax received at Hamburg from foreign countries during 1881 and 1882. The amount of honey was as follows, from

		1881.	1882.
Havana........	lbs	550,000	525,000
Mexico.........	"	1,100.000	835,000
Chili and Peru.	"	1,320,000	1,105,000
California.....	"	48,000	—
Domingo.......	"	450,000	270,000
Total,..........		3,468,000	2,735,000

Of beeswax the amounts received were as follows, from

		1881.	1882.
Chili...............	lbs	90,000	54,000
Venezuela.........	"	145,000	63.000
Angola............	"	14,000	—
Madagascar.......	"	48,000	33,000
West Indies.......	"	38,500	12,000
Total,...............		335,500	162,000

Honey is extensively used in Europe in the manufacture of honey wine, metheglin and cakes; for preserving fruit, and preparing medicine, as well as for table use, for which it is more generally used than in America.

One firm (Messrs. Field & Co.), in Paris, use ten tons of American beeswax per month in making candles for Catholic altars. The religious pageantry of Roman Catholic countries owe much of its spendor and influence to its altar-candles, each the tribute of a thousand flowers, collected by millions of bees, leading the thoughts back, perchance, to the sweet and pure origin.

Its other uses are very numerous and important. The New York *Grocer* enumerates the following:

Its property of preserving tissues and preventing mold or mildew was well known to the ancients, who use serecioth for embalming, and wax for encaustic painting, as in the wall pictures of Pompeii, wax candles and tapers play an important part in the processions and ceremonies of the Roman Catholic church. Wax is used by manufacturers of glazed, ornamental wall papers, and on paper collars and cuffs for polishing the surfaces. It is used in varnishes and paints, and for the "stuffing" of wood which is to be polished, as pianos, coach work, fine furniture and parquette floors. Electrotypers and plasterers use wax in forming their molds. Wax is an important ingredient in preparations for covering surfaces of polished iron and steel to prevent rust. Combined with tallow, it forms the coating for canvass and cordage to prevent mildew, as in sails, awnings, etc. Artificial flowers consume much wax, and, despite the introduction of paraffine, ceresin and mineral wax, its use appears to be extending. One of the oldest of its applications is in the laundry, and in polishing wood-work.

Bees and Fruit.

A correspondent in the *Prairie Farmer* remarks as follows on this subject, giving the results of some experiments. "The much-discussed question whether bees injure fruit was attempted to be solved by a committee of the Warsaw Horticultural Society. The work was begun, but finally neglected and never finished. How much and what was shown is the purpose of this paper:"

A committee of three was appointed in the summer of 1881, of which the writer was one—and on July 9th of that year, in conjunction with a noted bee expert, they began their experiments, with early peaches. Their first experiment was as follows: They took three peaches of equal ripeness—two of them with the skin slightly punctured, by insect or bird, and one whith the skin entirely sound and unbroken. The punctures in the skin of the two were small, say about the size of a pin-head. These three peaches were carefully handled, and were taken and placed in a hive with a strong swarm of bees.

Result.—The next day, which was Saturday, and just 24 hours afterwards, the hive was opened and the peaches examined. The two punctured ones were found to be partly eaten by the bees, while the one with unbroken skin remained whole as at first. They were all replaced again in the hive. On Monday, at the same hour—which was 48 hours from the last examination, and 72 hours since the peaches had been taken from the tree—they were again examined. This time the two were nearly consumed, and the one was considerably eaten.

The query here presented itself to the committee: Did the bees begin on the third peach while its skin was yet intact, or did they wait till it, by its decay, became broken? That single experiment could not decide that important point. At the period of the first examination, that peach was still whole and seemingly sound, but as two more days intervened before it was examined the second time, it is quite possible that it may have decayed so far as to open the skin before the bees began their work on it. It is affirmed by bee physiologists that the bees have no teeth or other instrument by which they could perforate the skin of a sound ripe peach. And they stoutly maintain that bees do not originate the trouble, but only follow after some other depredator. This single experiment of the Warsaw committee, though not conclusive, goes far to prove that this theory of the bee men is the correct one.

Numerous other experiments and examinations were made subsequently by individual members of the committee, in regard to peaches; but none worth reporting in reference to other fruits.

In one case, five peaches were designated as they hung on the tree. One of them was nearly eaten up by the bees, one about half eaten, two others less so, and with no sign of decay about any of them. The fifth was entirely whole, with the exception of one little round puncture the size of a pin's head; and another the size of a grain of rye. These were both located at the ripest and softest side of the fruit. No evidence of rot was visible. The origin of those punctures was unknown, but as at the time of the selection the bees were busy on the whole five, it was only a question of time—an hour or two—till they would all be consumed.

It may be mentioned, that in these experiments the big black ants were generally observed on the trees; and it has been suggested that they may be the depredators which make the original punctures, and open the way for the bees.

These experiments, however imperfect and unsatisfactory they may be regarded, taken in connection with other known facts, have convinced the writer thus far in the matter of the main question: That bees do not eat ripe peaches that are, if not to say absolutely sound, at least marketable.

Future experiments, it is hoped, will be made by that committee, as well as others, as to their depredations on other fruits.

What the Weather Will Be.

Prof. Bœrner, of Vevay, Ind., translates for the *Indiana Farmer* the following from the Latin, showing observations gathered from the most reliable sources in England, embracing years from 1677 to 1799, being 122. as follows:

1. When the vernal equinox is not preceded or followed by the usual equinoctial storms, the succeeding summer will be dry at least five times in six.

2. If easterly storms occur on the 19th, 20th or 21st of May, the ensuing summer will likewise be dry; the same characteristic applies to storms, from whatever direction, on the 25th, 26th or 27th of March, viz., a dry summer will follow.

3. When storms happen from or between the 17th and 23d of March, having directions from the west southwest, the succeeding summer will be wet five times out of six. In England, when both winter and spring are dry, they are always cold, but when these two seasons are wet, they are usually warm: on the contrary, dry summers and autumns are most always hot, and wet summers cold; hence, if the humidity of any special season be determined, an approximately correct idea may be formed what the prevailing temperature will be.

4. A wet autumn, succeeded by a mild winter, is generally followed by a dry and cold spring, which will be unfavorable to the growth of vegetation.

5. A wet summer is almost always succeeded by a severe cold winter, because the terrestrial heat has been carried off by evaporation; it has also been observed that wet summers promote great proficiency on the white thorn, so that an unusual fruitfulness of the shrubs is considered a presage of an intensely cold winter.

6. A severely cold winter is also indicated by the early departure in the autumn of cranes and other migratory birds, because these birds never leave for a southern climate until the cold has commenced in the higher northern regions.

7. When the month of September is showery, it seldom rains during the coming month of May, and, the contrary, should September pass without showers, the following May will be rainy and wet.

8. When, in summer and autumn, the preponderating wind is from the southwest, or when the temperature is unusually low, profuse rain may certainly be expected at the end of the season.

9. Tempestous storms and other violent commotions of the clouds, produce a crisis in the atmosphere, which is followed by a succession of several months of fine or boisterous weather, of whatever the incoming change may be.

10. A mild and rainy winter is always followed by a profitless summer.

11. When rainy weather prevails during a moon, the change succeeding will be fair weather for several days, after which rain will again set in; but when fair weather prevails during the moon, and the succeeding change be rain, fair weather will again return after the fourth or fifth day of the moon, and continue as before.

12. The most decided indication for fair weather, is the apparently great elevation of the celestial concave, and an evident disposition of the clouds to dissolve and vanish away.

Keystone Convention.

The "Seed Time and Harvest" gives the following report of the above named Convention:

We had the pleasure of attending a meeting of the Keystone Bee-Keepers' Association at Scranton, a few days ago. This is the only society of the kind in Northeastern Pennsylvania, and much interest was manifested by those present. The society numbers some fifty members, owning from six to two hundred colonies of bees. The questions discussed were: The Production of Surplus Honey, Wintering Bees, and Rearing Queens. Mr. J. Vandervort, of Laceyville, Pa., the inventor of the Vandervort Foundation Machine, was present, and exhibited some of the finest sheets of foundation we ever saw. All present agreed that a much larger yield of surplus honey could be secured by the use of foundation, than without it. It was generally agreed by those who had tried it, that the foundation for the lower frames or brood chamber, should be secured by fastening with fine wire drawn through the frames several times from top to bottom. These wires stiffened the frames and kept them from sagging, a fault which is quite common in unwired frames, and results in the breaking down of combs in hot weather. For the section boxes, small triangular pieces of thin foundation were recommended.

Different methods of wintering were described by the members present, and, as most of them had lost more or less bees, it was agreed that no perfect method had been discovered yet. Mr. George C. Green, of Factoryville, who had lost a very small percentage ror the past four years, advocated the use of the chaff hive, as also did several others. There appeared to be no professional queen breeders present, but a few chapters from Mr. Alley's new book on Queen Rearing were read, and proved to be very instructive.

It was decided to make a Society Exhibit at the next Lackawanna County Fair, and we presume that some fine specimens of the work of the indnstrous little insects, will be exhibited.

Prizes for Honey.

Messrs. H. K. & F. B. Thurber & Co., have issued the following Circular to bee-keepers:

First-class, uniform, well-packed honey, always sells quicker and for more money than honey of irregular grades, and it is, therefore, important for both dealers and producers to have honey marketed in the most desirable form. To interest producers, and induce them to attain this result, we have decided to offer the following prizes:

For One-Pound Sections.—For the best average crop of white honey, put up in one-pound sections, one first prize, consisting of a set of Appleton's Encyclopedia, 17 volumes; value, $85.00. For the second best, one second prize, consisting of a complete set of Chambers' Encyclopedia, 10 volumes; value, $30.00.

For Two-Pound Sections.—For the best average crop of white honey, put up in two-pound sections, one first prize, consisting of a set of Appleton's Encyclopedia. For the second best, one second prize, consisting of a complete set of Chambers' Encyclopedia.

The requirement will be a uniform grade of white honey, well fitted around sides of sections, neatly capped over, glass thoroughly glued to sections, and packed in clean, smooth, neat crates, as well as sections.

Where parties do not send us their crop, judgment will be rendered from a sample of five (5) crates, accompanied by an affidavit of the producers that it represents the fair average of his crop, and for these we will pay the New York market price for this grade of honey. The judges are to be the editor of the New York *Bee and Poultry Magazine*, the secretary of the Northeastern Bee-Keepers' Association, Mr. P. H. Elwood, of Starkville, N. Y., Mr. C. G. Dickinson, of South Oxford, N. Y., Mr. W. L. Tennant, of Schoharie, N. Y., and Mr. McCaul, who has charge of our honey department. This competition is to be open to any bee-keeper in the United States or Canada, and is to take place October 18, 19, and 20, 1883.

☞ The Central Kansas Bee-Keepers' Association will meet at Manhattan, Kansas, on June 30, 1883.

Thos. Bassler, *Sec.*

A Well "Timed" Mark of Respect.

Mr. C. N. Abbott, who nine years ago started the *British Bee Journal*, was, in January, succeeded by the Rev. Herbert R. Peel, as previously stated in this paper. It is with pleasure that we record the fact that the bee-keepers of Great Britain have presented him with a substantial "souvenir," showing that they are not unmindful of his labors in behalf of progressive and scientific apiculture. The *British Bee Journal* informs us that "the testimonial took the form of a handsome black marble dining room clock, designed after the style of the temple at the foot of the Acropolis at Athens, with bronze bas relief figures representing priests sacrificing to Minerva. Affixed to it was an inscription-plate stating that the clock had been presented to Mr. Abbott from a few well wishers and friends, as a token of their appreciation of the services rendered to bee-keeping by his establishment and editorship, for upwards of nine years, of the *British Bee Journal*. Also a framed Illuminated Address on vellum, with the names of the subscribers to the fund arranged in alphabetical order."

The Rev. Herbert R. Peel, his successor, in the editorial chair, made the presentation with the following remarks:

"He had been informed that this clock was called the 'Acropolis' clock, and the Arcropolis was not very far distant from Mount Hymettus. Milton is his 'Paradise Regained' says:

'There flowery hill Hymettus, with the sound
Of bees' industrious mummur oft invites
To studious musing.'

And he had been led to some musings in connection with the classic temple just referred to. Eighteen centuries ago there stood under the shadow of the Acropolis, a man striving to convert a city to the Christian faith. This man had to contest against a great mass of ignorance and superstition; and it had struck him that Mr. Abbott stood out, to some extent, as a similar example of a man working hard and single-handed to enlighten the ignorant and combat superstition. Their zealous friend had undertaken to teach the whole British nation on the subject of bee-keeping when he started the *Journal*. At the commencement of this task he was alone, as St. Paul had been. He had a number of difficulties to contend against, mostly those of apathy and want of sympathy. Even after 6,000 copies of the *Journal* had been sown broad-cast over the length and breadth of England, and 5,000 circulars distributed, only 200 subscribers came forward to assist. This result was quite enough to make any one despair. However, Mr. Abbott did not yield to the adverse wave, but fought on unflinchingly, and, after a considerable time, had the satisfaction of seeing his endeavors rewarded by the formation of the British Bee-Keepers' Association, and the establishment of metropolitan shows, which have been held, with one exception (in 1877), in London annually, for several years past."

"Mr. Abbott said that he felt somewhat embarrassed by the exceedingly kind and flattering remarks of Mr. Peel. All that gentleman had said of his early experience in regard to the cause they all felt so much interested in, came back on his mind with double force. There were difficulties, but having put his hand to the work, he determined to overcome them, feeling sure that in a good cause, with truth for his guide and honesty for his intention, he was sure of at length winning the support of the better class of bee-keepers in the country.

"In selecting a clock for him, they could not have chosen anything more suitable for a presentation. He looked upon a clock as he looked upon an honest man, because if it be a good clock, it always shows a face that one is pleased to look on, that is, a face that always tells the truth. This beautiful time piece would be his future companion, and whenever he looked on it, his memory would recall the excellent friends that he had made by a consistent course of conduct which he had always maintained in the *British Bee Journal*.

"There was not a single motion in the clock, but what was measured, from the second to the minute, from the minute to the hour, and from the hour to the day; and there was not in the *British Bee Journal* a single mark that flowed from his fingers, from the letter to the word, and the word to the sentence, but what was also measured, and measured by himself in the hope that it would be understood and appreciated as being strictly true, and written for the honest purpose of benefitting his fellow creatures.

"A clock, however, sometimes gets wrong, owing to its machinery being out of joint; so also he feared there must have occasionally been some little things out of joint in his conduct of the *British Bee Journal*, of which no one could be more sorry than himself. He was proud to see so many friends around, to welcome him on the present occasion, because he felt assured of their sympathy and acquiesence in the honor which had been done him that day. He could but express his heartfelt gratitude for their extreme kindness, which would always live in his memory."

In commenting on this, the *Bee and Poultry Magazine*, of New York, says that it "shows American bee-keepers how greatly the Europeans excel us in their courtesy and kindly wishes to those in the same profession. We hope the day is not far distant when American bee-keepers may feel toward each other the same generous, hearty good will." These are our sentiments exactly. Nothing is so disagreeable and disheartening, as the jealousy and strife persistently indulged in by a few bee-keepers and conventions in this country, trying to antagonistically array the East and the West. Such should learn a lesson from the above, and hereafter strive only for harmony, unity and fraternity.

Southern Exposition at Louisville.

This Exposition, which commences Aug. 1, promises to be of the greatest importance to the South. Bee-keepers should avail themselves of the opportunity to have a grand Bee and Honey Show there. Mr. Elias Thomasson, who lives at 1015 H Avenue, Louisville, Ky., writes us as follows, on the subject:

Louisville is a city of 150,000 inhabitants, but it has no depot for bee-keepers' supplies. We would welcome a good man here, to meet the wants of Kentucky and the whole South, to supply everything needed for the trade. He will meet a hearty welcome.

Doubtless you have learned, by the newspapers, of our proposed Exposition to commence the 1st of August next, to last 100 days. The building, covering 13 acres, is already far advanced, and will be ready to receive goods, the 15th of July next, for exhibition. Two New York City bands get $35,000 for their services, and also a $10,000 organ has been bought for the occasion.

No man has made application for an exhibit of apiarian supplies. Who will come? Send to me and I will forward the blanks necessary to make application, by return mail. There is no charge for exhibiting honey; any quantity of it; but I think $25 will be charged if manufactured articles are offered for sale, but that is not yet positive, as the superintendent could not give me an answer on his own responsibility.

Our people are expecting 1,000,000 of strangers to visit the Exposition, and, I will add, 1,000 men, who keep bees, in some sort of hives, will be here. What a chance! Who will take it? I am on crutches, but my heart is very full.

☞ The Bee-Keepers' *Exchange* has again changed hands. Messrs. Colgrove & Ullery are now the publishers.

And a change has been made in the proprietorship of the *Magazine*. It is now published by King & Aspinwall.

The American Bee Journal gives friendly greetings to the new publishers all around.

CORRESPONDENCE.

For the American Bee Journal.

Ventilation of Bee Cellars.

S. CORNEIL.

Mr. Allen Pringle's article, on page 167 of the BEE JOURNAL, pretty fully meets the requirements of "a rousing article on how to ventilate a damp cellar." He says it is scarcely practicable to put in a sub-earth pipe after the cellar is built, but I found no difficulty whatever. We just carried the excavation up to the cellar wall, and then broke a hole through for the pipe. After the stones were again built in, and the earth replaced, all was close. If possible, sub-earth pipes should be laid as much as 5 feet below the surface, because it is said that at that depth the thermometer ceases to show the daily fluctuations of temperature. The temperature is probably nearly 50°, which is said to be the uniform temperature of springs of water after running for some distance under ground. It will be readily seen how much easier a uniform temperature can be maintained in a cellar, the walls of which are surrounded by soil, a little below 50°, than in a room above ground whose walls are exposed to strong winds and the temperature constantly varying.

Mr. L. C. Root, who winters from 100 to 200 colonies with uniform success, takes the supply of fresh air from a warm room above. To do this successfully there should be a strong exhaust current from the cellar to the stove pipes or chimnies above, and the only opening for the ingress of air should be through the floor, as far as possible from the point of egress.

The ventilation of repositories not connected with artificial heat is often very faulty. Air has weight, and it requires force to lift or move it out of an apartment in order that pure air may take its place. Perfect ventilation is never automatic. I think if the particulars regarding Mr. Doolittle's new wintering cellar, for instance (see page 741 BEE JOURNAL for 1882), were submitted to a competent engineer for an opinion, he would be likely to say that under some circumstances the current would move in the desired direction, under other circumstances there would be no current at all, and again, that the current might flow in the opposite direction from that desired. I have long held the opinion that Mr. Doolittle's bees were either killed or half poisoned by their own breath, in his old "mud hut." The idea has been recently thrown out that while bees are in their semi-torpid state, it is better that the surrounding air should be foul, because they will not live so fast, and will come out younger in the spring. I think this position is untenable. It is true the respiration is lower while they are apparently dormant, but if supplied with pure air, they will make the fewer respirations per minute. They, at all times, consume some food, and for the purpose of combustion some oxygen is required. If the air only contains a reduced proportion of this, they will be obliged to breathe faster to get the necessary quantity, like the traveler who said he had to drink a great deal of water in order to get a little tea, only in the case of the bees, the extra quantity of foul air re-breathed is positively injurious. In regard to supplying bees with pure air, it is like what the squaw said about the whisky on being remonstrated with for having taken a little too much. Her reply was that a little too much is just enough. So with the bees, we need not be afraid to give them, if possible, a little too much pure air. The want of an exhaust current in such cellars as Mr. Doolittle's, may be very simply remedied by placing a large lamp in the pipe leading to the outer air. Some of the best engineers recommend using lamps or gas jets, as a makeshift, to ventilate small apartments, and I see by the report of the Board of Health for Ontario, that such an arrangement is used successfully for ventilating a part of the General Hospital at Toronto. Those who may desire to get all the details will find them in Gouge on Ventilation, published by D. Van Nostrand, N. Y.

My observations on the condition of the air in my cellar during the past winter, have led me to the conclusion that if we are to have the dampness as well as the temperature under our control, the sub-earth pipe must be of a material which is impervious to moisture. The pipe bringing air into my cellar is of pine plank, having a cross section of 36 square inches, and running 140 feet through a wet soil. I found that the air, as it entered the cellar, was excessively moist when it should have been comparatively dry, on account of the increase of temperature as it passed through the pipe. The relative humidity was generally from 90° to 95°, but sometimes the air was completely saturated as it entered the cellar. For instance, on the 8th of March, when the air outside was 2° above zero, the air entered the cellar at 36°, and was fully saturated with vapor. Now, air at 2° is capable of containing nearly six-tenths of a grain of vapor per cubic foot when saturated, but the air outside was not saturated, and consequently contained less than that quantity. Saturated air at 36° contains about 2½ grains of vapor per cubic foot. Therefore, in passing through 140 feet of wooden pipe, the air must have acquired at least 2 grains of vapor per cubic foot. Again, on the 8th of April, the air outside was warmer than that in the cellar, but the nights were still cold. In the evening, as the temperature was falling, I watched till the thermometer outside and in the mouth of the pipe in the cellar, showed exactly the same temperature, 42°. The relative humidity should also have been the same, but there was a difference of 23°, the relative humidity outside being 67°, and that of the air as it entered the cellar 90°.

My conclusion is that for sub-earth ventilation, we require vitrified sewer pipe securely cemented at the joints. In this way only can we have dampness under control and exclude foul gasses. It is possible that with such a pipe the air might be found to be too dry. The exact degree of humidity at which bees can be kept in a cellar for six months in the best health has, I believe, yet to be determined, but until we have more information on the point, I think it will be safest to aim at about the average relative humidity of summer; in Ontario this is 74° of moisture out of a possible 100°.

Your readers may desire to know how my bees wintered in such a moist atmosphere. I am pleased to be able to report that they did pretty well. On the 3d of November last, I put in 65 colonies, and on the 16th of April, I carried out 64 alive. One had starved, three were weak, and another has since been found to be queenless. There was not a square foot of moldy comb in the whole lot. There was a little spotting in some of the hives, but so little that it need not be taken into account. When they were set out, the discharges were not copious, nor yellow and watery, but small and dark colored. I had no swarming-out or other troubles, although they were set out promiscuously between seven and nine o'clock in the morning.

Possibly some one will say that this experience is rather against the theory I have been advocating, that a damp atmosphere is one of the main causes of dysentery, but wait a little; the above is only a partial statement of the facts. Evaporation will take place in an atmosphere having a relative humidity of 90° or 95°, provided the air in contact with the evaporating surface is constantly changed. The wash will dry in such an atmosphere if there is a wind. My bees were in very moist air, but they had very good ventilation, and had the means of keeping as warm as they required to be. My cellar is small, the cubical contents being only 660 feet, or when the hives are in, say 500 cubic feet of air. There are two exhaust pipes connected with stove pipes above, changing the air very frequently. Two colonies of bees in closed-end Quinby frames were placed side by side separated by a thin veneer of wood, and these were tiered up three in height. The frames were raised 2 inches above the bottom boards, and one side of this space was left open. The hives were covered with thick quilts of sheep's wool over a "Hill's device." A peep under these quilts at any time would find the bees quiet, dry, snug and cosy. On account of the heat being so well confined by the quilts and of the heat from the adjoining cluster, many of the colonies clustered out in the open space between the bottom board and the frames, the greater part of the winter; some of them for 120 days. Some bee-keepers would probably call this "high pressure" as to the temperature of the air in the cellar, but it was not, for a thermometer placed midway between the floor and ceiling, averaged about 40°. Early in the winter, in a few hives, the dead bees began to drop from between the combs to such an extent that soon the heaps reached to the frames, and these heaps of dead bees were removed two or three times. If the frames had not been raised, the ventilation of the hives would have been effectually stopped. The bees dying thus were not distended, and showed no signs of dysentery. I increased from 39 to 65 after the 1st of August, last season. Possibly some of my bees were prematurely old. I fed 1,025 pounds of loaf sugar last fall, and did not discriminate against combs containing pollen. I think my past winter's experince shows that bees may, with very good ventilation, be wintered in a very moist atmosphere, and that they may be so "clothed" as to cluster out in an atmosphere at 40°. I attribute my success to extremely good ventilation. I lost extensively in the same cellar during a previous winter through want of ventilation. I may give the particulars at a future time.

Lindsay, Ont., May 12, 1883.

ERRATA.—In the 12th line from the top of the second column, page 200, there should be a minus sign before 8°. The want of it makes an error of 16°. Then the figures 545 and 2126, a little further on, are made a thousand times too great by the omission of a decimal point before the first 5, in the first case, and the substitution of a comma for a decimal point, between the first 2 and the 1, in the second case. There are other typographical errors of minor importance. S. C.

Read before the Western Maine Convention.

Bee Pasturage in Maine.

DR. J. A. MORTON.

I do not know much of this shrub which is referred to by Mr. Alley in his lately published "Bee-Keepers' Handy Book," unless it is our common white alder, found growing wild so plentifully on low lands. If it is, you are all familiar with it. It is a clean little tree, bearing an abundance of bright red berries, of a sweetish, bitter taste. I do not know about its flower, but think you had better take observation of it this season, and govern yourself in regard to it, as it proves itself pleasant to the bees. It would make a good hedge row.

The basswood, or American linden, is the most important honey-yielding tree in the whole State. It is well known to all bee men, and I only call attention to it, for the purpose of urging you to stop cutting it for timber at any price. Let something else take its place in the lumber yard, and keep it growing for the bees; also propagate it by setting out trees in low places, and along the numerous little streams in pastures, and along streets and roadsides and by fences, and even in woods where the growth is scattering, or the ground is cumbered by dwarfed spruces or other evergreens. Where nothing but trees can grow there set the basswood. The locust mingled with it or in close proximity, on woody pastures, on the more barren ridges and sandy knolls, will grow quite fast, and soon bear flowers and become valuable for timber.

In the last part of the honey season the wild bloom is quite plenty and useful. Fireweed on the meadows and river banks; and goldenrod on the dry, worn out sandy plains, in fields and pastures where nothing else will grow, are quite good honey plants and help out the bees nicely—still I am not very partial to them, for no stock eats them, and they are only useful for their honey, and the syrup from granulated sugar is as good if not better for wintering, but in this matter let every man suit himself. The wild aster and frostweed are the last honey plants of the year, if we accept sweet clover and motherwort, which last from the first flowering till the severest frosts kill them down. Motherwort, catnip and some few others are good weeds to sow in waste places not fit for other flowers, but they should be sown in considerable quantities to be of any benefit. A little patch of these plants are an injury because the bees are quite fond of them, and are diverted from a larger extent of other flowers not so pleasant to them but yielding much more honey, and more profitable to the bee master.

To those different trees, shrubs and plants, you can add such as you find by experience good for the purposes intended. Buckwheat is a good grain for feeding, and generally pays for cultivation in its yield, but is quite uncertain for honey. To some it will be profitable to raise, to others it may not. Try it, if you like.

I wish now, having mentioned in detail the leading honey plants of our State, to give a rational, easy and economical method of renovating any of these exhausted and worn out lands to which I have called attention, which will enhance their value year by year, and at the same time give you a fair percentage on the investment by an immediate return in the increased production of honey. If you are the fortunate or unfortunate, just as you may please to think it, owner of such property, not worth the trouble of repairing the fences every spring, for what it will produce through the summer, and, perhaps, turned out to common, go and "survey the landscape o'er" and decide that you will do something for the cause of agriculture and apiculture, for they go hand in hand in this enterprise.

If you have several pastures take the one nearest to the bees, first. If quite small, and you can possibly do so, exclude all stock from it for a year at least. If it is large and you cannot lose the use of the whole of it for the season, partition off a part of it by fencing in more or less, but as much as you can; and by using the loose rocks for this purpose, you gain two points, you have a substantial fence and get rid of the rocks. It pays to snug up rocks in pastures as well as in fields. Should there not be rocks which can be easily handled in sufficient quantities to complete this fence, finish it with the scattering spruces, firs, and other stunted evergreens within the enlosed part, which are only a damage, as they only poison the land for grass. Stumps and logs can be used for this purpose also. Now go over it and cut every stunted evergreen from them—for nothing will grow under the shadow of such trees—dig up root and branch, running junipers, sweet ferns, hard hacks, brakes and all; removing stumps if convenient, and either pile up in small heaps to burn; or what is better, leave them to decay on the ground, for a cord of rich rubbish left to rot, fertilizes ten times as much as its ashes after being burned. Should there be scattering red or rock maples, elms, willows or other trees producing nectar bearing flowers, especially basswood or locusts, by all means let them stand, and if they are not in sufficient quantity, draw on the woods or other sources for enough to fill the complement. Or, if the soil is suitable, and sheep are to occupy the land, it would be a more excellent plan to set native grown apple trees of the hardy winter varieties, and in a few years, by a little extra pains, you will have a nice young orchard. None of these trees need be set in a regular line or order, but single or in clumps in very rocky spots or places where the grass will not grow or is inaccessible to the stock. Of course, before setting these trees the land must be plowed, if it can be done even poorly, and smoothed off, with some dressing, the more the better, such as stable manure or muck, or ashes, or even plaster will help it some, but be as generous as you can, and you will never regret it.

Having got the land all ready for the seed, be liberal with that also, for you can well afford it, and, if you wish to make the bees happy, sow from 5 to 10 pounds of sweet clover to the acre, or its equivalent of White Dutch or Alsike. I should prefer to have them sown separately, but you may like to mix them—do as you please about this. To these clovers you may add the seeds of good pasture grasses, if you wish to favor the stock which is to occupy the pasture, rather than the bees; but remember one thing, herds grass is not good for this purpose, the cattle soon kill it out.

Now, perhaps, some will say it is too late to do all this when there is scarcely time to get in the regular crops. That is all true; but try to get in an acre or two of sweet clover, or White Dutch, or Alsike, and make the bees happy, and you can leave the balance of the pasture to work on by odd jobs through the whole season, and, by fall, you will be all ready to sow the seed, or at least by early spring. But in that case the cattle must be kept out next year instead of this. All I have said of the small pastures will apply equally to the large, whether mostly clear of woods or partly in forest growth; but let the forest be divided off from the cleared portion as much as it can be, for woods are not good pastures, excepting basswood for bees, the grasses and tender plants will not grow there, particularly is this true of evergreen woods. All worn-out pastures, old orchards and mowing fields, may be treated in the manner above indicated with variations to suit each particular case, only be free with the manure cant, and do not draw on the bank till one or two years' interest has accrued, and do not let the cattle in during spring and fall. Perhaps some may wish to try buckwheat in order to get immediate returns for their outlay, and because they can sow it later in the season than clover. There is no objection to this, if they plow it under after the bees have worked it, or let lay on the ground and decay. But the latter plan is liable to the danger of the ripened grain re-seeding the ground and coming up next year and choking the clover out. This will not pay. If turned under, the ground must be smoothed off and well seeded with the clover, and will need a little fine dressing, ashes, plaster or phosphate as a starter.

But some will say: "This is altogether too expensive; no man can afford to go over his pastures in this way; it would cost a fortune." I think no man can afford to let his pastures go on as they have for the last 50 or 100 years. As the man said in the storm at sea, "something has got to be done." One great disadvantage of the present condition of pastures is this: There is no fence between forests and cleared land, or what is usually denominated cleared land, and the stock drop most of their manure in these woods or along the little streams in out of the way places, and it is lost for fertilizing purposes. If these fences were put up, they would be kept in the best grazing, and leave the dressing where it would do the most good. The growing forest would not be fed down, and the smoother places would be enriched, and, perhaps, by a little attention in keeping down shrubs and weeds, the forage would be sweet and tender.

But there is a cheaper method, though it is not so thorough, and I doubt whether it would be much cheaper in the end. That is, to go over the pasture by odd jobs, and with a heavy, rough harrow, tear up the knolls or shave them off with a plow, throwing the turf bottom up over some rocky hollow, tear up any roots, stumps or spots of moss; rake up the leaves, cut stunted trees close to the ground, scatter the seed and fertilizer, and as you go on so, it will be done as far as you go. This will give you a chance, during the year, to do a great deal, but the cattle will injure it if it is in the open pasture, and they are let in there. Still another method is to fence off half, or a part of the field, and let the cattle have that and fence in a corresponding breadth of some pasture most convenient and appropriate, and work it for crops, allowing a liberal supply of manure. If not too far from the house, build cheap hog pens, and put half a dozen shoats in a small yard connected with it—plant beets, sow peas, turnips and some fodder corn, and feed them in the yard supplying them plentifully with leaves for a nest, and muck if it can be got. This will give you more dressing right on the ground, and save hauling so so far. Or a flock of sheep can take the place of hogs if thought best, but whatever stock is put there it must be fed extra besides what is grown upon the land. Many advise putting sheep into a run-down pasture to fetch it up, there is surely some conceivable argument in favor of this, that is the supposition they will forage on the woods and leave their droppings on the cleared parts, which is contrary to the facts. I think they will be more likely to reverse the thing—feed down what little grass they can find in the green places and clefts of the rocks early in the morning, and return to the woods to digest and discharge it. Any man who puts a flock of sheep into such a pasture, will be convinced in a few years of the truth of the adage from nothing, nothing comes, and find himself in position of the boy who went whaling. At the end of three years the captain settled thus with him: "0's an 0, and 2's a 2; not a cent coming to you."

I will ask you to closely observe through the season, in regard to the various plants and trees named to you, as to their time of flowering, the preference of the bees for them, the amount of honey and its quality, so far as you can, from the different species, and carefully note all down that you may correct any misstatements I have made, and have a more accurate knowledge in the future. This plan will tend to make us all more observing and more successful in our fascinating employment. Above all let us keep one fixed rule constantly in mind, never to be so selfish as to hide any light we may have. Let us constantly seek more light and knowledge, and be as ready to impart it to our bee-keeping brothers, as we are to ask it of them. The most humble member of our fraternity may, by honest endeavor, become the most useful of us all, a bright and shining light in the firmament of the apiarists. That we all strive earnestly, honestly, and unselfishly in this cause is my earnest wish.

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For the American Bee Journal.

Frost Bitten Bees.

W. H. SHIRLEY.

A queer heading for an article on bees I hear some one saying. Wait! let me explain a little. Stimulative feeding in the spring to induce rapid breeding, is, I believe, advocated in all bee books and by many writers. That idea cost me quite a little item, in the way of dead brood, 5 years ago. The same thing occuring again this morning (on a smaller scale—one hive only), put me in mind of old times.

I always winter the bees out of doors, with chaff protection; I have found it the best, so far. I unpack them generally from April 20 to May 10. I have unpacked only 14 this year. At the time of this writing, 4 years ago, we unpacked them early. Bees were in good condition, except that quite a number lacked stores. Here was a chance to try stimulative feeding. As the weather was warm (about 50° most of the time), things moved off nicely; and brood-rearing increased rapidly. We were having visions of early swarms, and had already divided 5 colonies (dividing for increase, and I have quarreled since that time too). But, alas! the mercury dropped down to freezing; and 2 or 3 frosts followed. The bees had to contract their cluster in order to keep warm. All around them were patches of dead brood; enough to double their numbers.

Stimulative feeding, and I had a quarrel then and there, and never made up, until this spring. Our new way of wintering gives a chance to examine the bees often, with little trouble. We could feed them when the mercury was down to freezing, with ease, and thought we would try stimulative feeding again. Success crowned our second trial, except the one colony spoken of above. On the 18th, we commenced to unpack, as the weather was promising; on the 21st the mercury went down to the freezing point again, and the old story of dead brood in one hive, prompted us to write our little experience in stimulative spring feeding.

The bees in the one colony becoming discouraged, killed their queen, thinking, perhaps, that a young queen would bring warm weather and a "honey shower."

I am in favor of stimulative feeding now, but I want protection from sudden changes in the weather.

Glenwood, Mich., May 22, 1883.

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Mahoning Valley, O., Convention.

The quarterly meeting of the Mahoning Valley Bee-Keepers' Association was held at Berlin, May 28.

The attendance was good, the display of apiarian appliances first-class, and the basket picnic dinner was enjoyed by all.

The forenoon session was called to order by the president, Mr. Laundus Carson. The minutes of last meeting were approved. The chair appointed the following committee on apiarian fixtures on exhibition: Mr. Page, Mr. Hall and Mr. H. A. Simons.

One of the most interesting features was the question box.

"Is it possible for an Italian queen to fertilize by a black drone? Mr. Carson said, "I believe that all the different breeds of bees will mix more or less."

"What is the cause of my queens getting balled at the entrance of the hive? I lost several this spring; I found them dead on the floor of the hive." Mr. Simons thought it a weak colony, virtually starved out. Mr. Carson said, "I got some queens of Mr. Heddon, and lost some of them by getting balled. By a close examination I found them with insufficient food." Mr. Hall said, "It only happens in weak colonies where they have more brood then they can support."

"What is the cause of spring dwindling?" Mr. Carson said, "the Italian bees are more venturesome in cold weather, and perish by cold." Mr. Simon said, "the black bees, with me, are more venturesome than the Italians."

"Will handling bees in the spring materially injure them?" It was thought to be a matter of how rough they were handled.

"Will bees swarm in the spring if they have plenty of honey?" It was thought they would when the hives became full of young bees.

Mr. Simon said, "he thought one cause of dwindling was a lack of young bees to take the place of the old ones in the spring, and would advise breeding as late as possible in the fall. I winter out of doors. I use as young queens as possible for late fall breeding. After the bloom is gone, I feed melted sugar in the hives. This spring I noticed a dwindling of my bees; the cause being the lack of young bees."

Mr. Kinney said, "I have had queens which laid eggs and the workers destroyed them. What is the cause?

"Are Italian bees longer lived than the black bees?" Mr. Carson said, "I do not know. It is a fact that the black bees are short lived in the spring."

"What sized frames would you advise to get the most honey from, long or short frames?" There was a difference of opinion. Mr. Simon used the long frame, and thinks it preferable. Mr. Carson uses the Union frame, and is well pleased with it.

"The best way to preserve empty combs?" Mr. Carson said, "I clean out my hives and hang them in such a way that mice cannot get at them."

Mr. Simon said, "I keep mine in my hive, under a shed, when it is cool." Mr. Carson said, "if worms get into them, fumigate with brimstone, not too strong."

"Will the drones produced by fertile workers on virgin queens perform the office of drones?" Mr. Simon said "I prefer young queens fertilized by a good drone."

"How is the best way to get rid of fertile worker bees?" Mr. ——— said, "I unite them with a good strong nucleus. Mr. Simon said, "I take the hives that have fertile workers and shake them on the ground, and the fertile workers never crawl back."

"Will it pay to put on sections for the bees to draw out foundations for apple bloom?" Mr. Hall said, "yes." Mr. Winnery thought that if the body of the hives is full of honey it would pay.

"Which is the most profitable to produce, comb or extracted honey?" Mr. Carson said, "extracted."

"Do you prefer drones from the parent colony for a cross?" I think it would be preferable.

"A queen from a pure Italian mother, that meets with a black drone, what will her drones be?" Mr. Page said, "they are his best workers, and are, as a general thing, less quarrelsome." Mr. Hall says, "I wish to breed from the best, let the breed be what it may. I should cross with those drones whose record is good."

"Do bees ever swarm on apple bloom?" Mr. W. said, "I have known of such instances, but do not think it advisable." Mr. H. said, "I would build up weak colonies by giving them a few sections of brood."

Committee report: We find placed on exhibition the following: Mr. Eadler, a novice extractor, also a new hive which attracted considerable attention. Mr. George King, a Simplicity hive. Mr. L. Carson, a Union hive, a combination of several.

The matter of where and when to hold our next meeting came up for action. It was the unanimous voice of the meeting to hold our meetings at different points in the Mahoning Valley.

Adjourned to meet at Newton Falls on the third Saturday of August, 1883.

E. W. TURNER, *Sec.*

For the American Bee Journal.

Shall Separators be Used?

F. I. SAGE.

I noticed by the BEE JOURNAL (page 263) that Mr. T. E. Turner confesses that he is becoming "so insane" as to dispense with the use of separators. I consider it pretty good evidence that he has become insane on this subject, and as he admits it, we will take it for granted that such is a fact. But, really, I hope he will not induce New York State bee-keepers to adopt this plan of securing surplus honey. The bee-keepers of New York have the reputation of securing their comb honey in the very best shape for market, and all use separators, except, perhaps, a few who are away behind the times. Of the 50 tons of York State comb honey I have handled during the past season, not a single lot have I bought except where separators have been used; nor would I buy any such, unless at a discount. Every pound of honey I buy must be secured by the use of separators, and every section must be glassed, except the small amount of one-pound sections I use—those should not be glassed.

Mr. Turner says glassing sections are too expensive to the producer; this remark will make some of our York State producers "smile." I always supposed this glassing was the most profitable part of bee-keeping; to be sure, it is some work to glass sections enough to use up one or two tons of glass, but I guess the bee-keeper works many hours for less pay then he gets for glassing his honey. We know it is nonsense to say it does not pay the producer to glass his honey, but whether it does pay or not, our more-advanced bee-keepers, those that get their honey in the most desirable shape and secure the highest price, know it must be glassed for our Eastern trade. I have had Michigan, Illinois and Missouri honey, which was secured without the use of separators, and hence, could not be glassed, but I want no more of it. Although the quality was all right, the style of putting it up was not satisfactory to the consumer, the merchant, or the honey dealer. I could go on, and lengthen out this article, by giving various reasons why this is so, with our Eastern trade, but take it for granted that New York State bee-keepers are too shrewd, and too far advanced in their profession, to dispense with the use of separators and glass, in order to secure their honey in the most remarkable and profitable shape.

Wethersfield, Conn., May 28, 1883.

Read before Central Michigan Convention.

Cellar vs. the Chaff Hive.

J. T. MATTHEWS.

Among the many ways of wintering bees, which are adopted generally by the people of this country, but two are worthy of notice. These are "cellar wintering," and "chaff hive wintering," the other, leaving the bees out of doors, to "come through" as best they may, is not worthy of mention, for the simple reason that it does not pay.

We have then a single hand-to-hand combat—cellar vs. chaff hive. The question we are trying to decide is, "How to winter bees the cheapest, and have them come out healthy and ready for work in the spring." "Things seen are mightier than things heard." I can do no better than to give a retrospective view of some things brought to my notice within the past year, at the College apiary.

On the 5th of last October, we completed our preparation of the bees for winter. We had 17 colonies of Syrians put up for winter as described by Prof. A. J. Cook, each colony occupying 8 combs of honey, or about 1 cubic foot of space; each colony had about 30 pounds of honey, and from all hives, except one, pollen was carefully excluded, in looking them over. All hives alike had a sack, made for the purpose, filled with very dry sawdust over them, to absorb moisture from the hive and to assist in keeping out the cold in the fall and spring. Four were chaff hives to be left out of doors through the winter, and these, in addition to the sacks before referred to, had sacks extending so as to fill the entire space between the division-board and the end of the hive, thus surrounding the bees on all sides by cushions of chaff. The bottoms were protected by keeping the snow banked under them. Our chaff hives were complete.

On the 14th of November, all the hives were carefully weighed, and the weight of each set opposite to its respective number. On the same day, ten of our common hives (*i.e.* single-walled hives holding 18 frames) and three chaff hives were carefully removed to the cellar. The object of chaff hives in the cellar was to test chaff hives on an equal footing with single-walled hives, to see the effect upon "spring dwindling." The temperature of the cellar, for the winter, ranged from 38° to 42° F. Of the temperature outside you can judge for yourself; suffice it to say it was very cold.

On the 5th of April we returned to our old friends, after an absence of 142 days, and find them as familiar as ever. To complete our experiment, we commenced by weighing the outdoor chaff hives (four in number), and found an aggregate loss of 58 pounds, or an average loss of 14½ pounds to the colony. One colony was dead, and, as one standing by remarked, they died "in the midst of plenty," for they were dead, clustered on frames at one end of the hive, and the honey was gone from those frames, but the frames at the other end of the hive had plenty of honey. The theory is that they became so cold that they could not change their cluster, and they froze to death.

The 13 colonies came from the cellar with a loss of but 56 pounds, or an average of 4⅓ pounds to the colony. The greatest amount of loss, in any colony in normal conditions, in the cellar, was 6 pounds, and the least amount, 1 pound.

One colony, which was put up for the cellar with the usual amount (30 pounds) of honey, was found dead, and their honey entirely gone, the weight showing a loss of only 10 pounds. We cannot account for this, except to say that they must have been robbed last fall, after giving them their winter supply of honey, before removing them to the cellar in November.

The colony in which the pollen was left had very badly dwindled. Their queen being dead, they were united with another colony. The colonies wintered in the cellar, with two exceptions, (the one containing pollen and the one supposed to have been robbed in October), show very little loss in numbers, by the dead bees found in the hives. In fact, in looking them over, we find many of them apparently as strong as they were last October, while those wintered in chaff hives out of doors (judging from the same source of information) are very weak indeed.

On examining the bees, a few days after removing them for the cellar (April 7), we find eggs in nearly every hive, showing that they are in first-class condition, and will have a full force ready for work when the flowers come; and we think from the general appearance of the bees, that (leaving out the two principal points in favor of cellar wintering: namely, safety and amount of honey consumed during the winter) the bees which have been wintered in the cellar, are in better condition to go to work this spring, than those wintered in chaff hives.

We often hear the objection raised to cellars that they leave the bees in poor condition to stand the changes of spring, but we candidly believe that the fault is rather to be found with the condition of the cellar or the method of treatment in the spring, than with the method of preparing for wintering.

We would conclude then by saying that cellar wintering seems to us to be, at least, the most economic way to winter bees. We believe it, for three reasons: First, it is safer; secondly, it saves honey; and third, it leaves the bees in better condition in the spring.

Michigan Agricultural College.

For the American Bee Journal.

Old and New Rhymes.

EUGENE SECOR.

A swarm of bees in May, is worth a ton of hay.
A swarm of bees in June, is worth a silver spoon.
A swarm of bees in July, is'nt worth a fly.

That's the way the rhyme ran, in the days of our boyhood, among the hills of eastern New York. These old sayings, like some of the weather-wise prophecies of a later period, may be of more value in the region where they originated, than when transplanted into this continental prairie soil. At least I thought so, the other day, when the first swarm of bees issued in May.

A ton of hay is worth, in this land of plenty, about $2.50, while an early swarm of bees ought to yield as much profit as a cow worth $30. The latter part of the "saw" is as far from the truth as the first. A swarm in July will often fill its hive in 2 weeks, and store a large surplus for its proprietor. August swarms, which did not elicit even a passing notice from the ancient rhymer, will make a hive feel like a chunk of lead when you attempt to move it in the fall. I think in some cases a September swarm might gather honey enough to winter on.

We need a revised edition of those old "sayings," to meet the new conditions of things—at least here in Iowa. If I could grind out rhymes, I would attempt the work myself. I would make it read something like this:

A swarm of bees in May is a "hip, hip, hooraa!"—
(in Iowa).
A swarm of bees in June, is in the same tune,—
(in Iowa).
A swarm of bees in July,] you need'nt be afraid to
try,—(in Iowa).
An August swarm, as the weather is warm,
Is all O. K.—don't fool it away,—(in Iowa).
A swarm of bees in September is rare,
But even that can be saved with care,—(in Iowa).

Warm weather has been slow in coming this spring. Only on a very few days has the thermometer indicated above 60°. There has been no frost to damage fruit in this part of the State. Everything is coming along finely, except corn, which was planted late. We have had an abundance of fruit bloom, and white clover is just beginning to blossom. We anticipate a prosperous year.

Forest City, Iowa, June 2, 1883.

* * *

For the American Bee Journal.

Italian and Hybrid Bees.

J. O. SHEARMAN.

On page 236, of the BEE JOURNAL, I notice Mr. Hutchinson's question in regard to best hybrids, etc. That reminds me of some of my own experience, which, I think, it would worth while to make known, at this time, as it may throw a little more light on the subject under inquiry. Some may incline to ridicule "Heddon's hybrids" as being no better than all others, but there certainly is a great difference in hybrid bees.

When I first started in keeping bees as a business, I used to wonder at so many people (and those who seemed to be posted, too) who spoke and wrote about the black bees being so much crosser than Italians, while I had large brown bees (called blacks) that were so quiet and easily handled that I opened the hives without smoker or protection of any sort, and when I got my first Italians, I found they were quicker in their movements, and more liable to sting upon slight provocation than those I had before. These brown bees were excellent breeders and workers also. I increased one colony to five, and had a fair surplus too, from four of them.

But two years ago this spring I found out the difference between brown and black bees. We all have in mind that severe winter and spring. I lost over 60 colonies, and to help fill up my empty combs, soon enough to be able to obtain some surplus. I bought 20 colonies (19 of them blacks), and they *were* black too, black as an old boot, and as cross as a setting hen. I left them at a neighbor's, 1½ miles away from home, so as not to mix with my Italians. I then Italianized what I did not trade off. Years previously I had tried different strains of Italians, mostly light ones, but they would swarm when I tried to crowd them into the honey boxes, while my old brown bees would fill a set of boxes, then notify me they wanted more room, and take what I gave them in a contented sort of a way, and "stick to their knitting." Well, in looking over the papers one spring, I noticed that Heddon had been Italianized, so I sent to him for a colony of dark Italians, requesting him to send me one of the old queens he had received from Mr. Oatman, if he had them booked, and I believe he sent it, for though she did her work completely that season, she played out the next; but not until she had supplied me with a race of bees that excelled anything I had yet tried, for they would go up freely into the boxes and did generally fill all, or nearly all the room I gave them, before swarming, unless crowded in the brood-chamber. And, I could put off swarming by giving more room in the body of the hive, at the same time giving more surplus room, in the same way I had previously practiced with my brown bees.

Now, I come to the hybrid point of the matter. I crossed some of the young queens with the drones of the brown bees, and they produced such good bees for work, that I have never got rid of them all yet. Some of the best of those dark Italians survived the hard winter of two years ago, and I was able to run part of them through last season even, without swarming at all, with a good surplus, and they were always strong in bees.

My hobby has been, and is, to run for surplus, without much increase, to avoid the impression that these bees would not breed fast enough for profit. I will state that I had one of them (two years ago) fill two sets of brood comb, at the same time keeping both well supplied with brood; but I consider that bad practice, as a queen soon wears out with such management.

In this connection (though off of the subject) I will say that I am convinced I have had a queen do good business through a whole season when she was 5 years old.

Last year (1882) I had several colonies of those first-class hybrids (Italian queens fertilized by brown drones), and they fairly took the lead of anything I had, for surplus, and breeding at the same time. They had 11 brood frames, 8x20 inches, and 75 pounds of surplus room in the height of the season, and all full of bees and work.

New Richmond, Mich.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Use of a Honey Board.

Mr. Heddon: in tiering up cases, in your hive, do you use a honey board between the first and second cases? Please answer in the BEE JOURNAL.

R. M. DENHAM.

St. Clairsville, O.

ANSWER.—We do not. There is no need of any there. Between the brood frames and first case is the place where bracing and consequent daubing occurs.

Honey Register.

Mr. Heddon: please explain how to use your honey register.

IRENEUS M. FOOTE.

Creston, Iowa.

ANSWER.—The following represents our surplus honey register, and it saves us more than $25 worth of time annually.

29	30	31	1	2	3	4		Renewed.	
28						5			
27						6			
26						7		•	
25			*			8	3-4	*	1-4
24						9			
23						10			
22						11			
21						12			
20	19	18	17	16	15	14	13	1-2	

The dial plan was taken from the Root queen register. We drive a pin into each of the stars just over the tapering part, or about ½ inch. Use the cheap, soft, No. 2 pins, which cost 5 cents per paper; they are better than the higher priced pins. To drive them straight, we use a little square block, with a crease cut square across it, which the pin lays in while being driven. Now, bend the pin to a right angle, and a dial is formed. We use two styles of paper, one of thin white writing, which we paste on the north back corner of the super, and one of manila straw-colored tag board, which we tack on. I use and prefer the paste plan. Now, suppose you put on a case or super, either for comb or extracting. If you do so on June 2, put the left hand pin at "2," the right hand at "R," in the word "Renewed." Now, if you look at this super to see how business is developing, and find no commencement made on June 6, set the left pin at "6," and the right one at "D." "R" and "D" both denote an empty super, but "R," that it has not been examined since put on; "D," that it has one or more times.

On the "12" you find it ¼ full; put the left pin at "12" and right one at "¼." If ⅓ between "¼" and "½," and thus for any proportion your eye tells you is correct, from just started to nearly finished. With our tiering up system, we use one on every case, and you see we can tell just how matters stand, and just where an hour's work is needed *at once.*

We need no month dial, as he whose memory is a month "off," should not try to manage an apiary. We know just how practical and useful these registers are, by how we chafe when we come to one that we made the error of not tagging with the register.

Our style of arranging the figures in the dial is much better than Mr. Root's; the square form with all the figures upright, shows off at a glance a long way off.

SELECTIONS FROM OUR LETTER BOX

Bees and the White Clover.

We have rather a bad season for our pets; cold and raining some now. Near me, we have a great crop of white clover, but hardly a bee have I seen on it. Dr. N. P. Allen says, in the last BEE JOURNAL, that the bees are working on white clover in his neighborhood. I walked through a large field of beautiful clover, and I saw only two or three bees on it. We have fields literally white with it; and near us hundreds of acres of it. I have had only one swarm as yet, and that went back to the parent hive.

G. W. ASHBY.

Valley Station, Ky., June 3, 1883.

Honey Prospect in New York.

Up to this date bees have had a cold, windy spring; and where they were not in good condition when set out, they have "gone up." I have lost but one colony since they were set out, and that was deserted when I was away. Bees are in fine condition, for quite a large number of them are preparing to swarm, and, if the weather should be favorable for a week, general swarming may be looked for. There is every prospect for a large crop of honey, in this locality, to those that have bees; for the fields are covered with clover, which will begin to bloom about the middle of this month. Basswood is budding as full as I ever saw it, and, with favorable weather, bees must have a lively time. It has been exceedingly wet ever since the snow disappeared in this locality, until the last 4 days, which have been warm and pleasant.

IRA BARBER.

De Kalb Junc., N. Y., June 4, 1883.

Cheering News from Kentucky.

Our Convention on the 2d inst., was a grand success—a fine turn-out of practical bee men. Our white clover harvest is immense, and the largest crop of honey will be gathered in Kentucky that we ever harvested; the clover fields look as white as snow, and bee men are worked down, and are in clover.

N. P. ALLEN.

Smith's Grove, Ky., June 4, 1883.

Texas Honey Crop.

The honey crop in this district promises badly. So far, there is little or none coming in, and colonies are dwindling very much. I have been feeding mine, and am doing so now; and, instead of dividing, it becomes a question of uniting weak colonies. With no honey coming in, queens stop laying, and colonies are fast getting in such a condition that, if there was to come a honey flow, the bees could not fairly gather it. Last year there was a good crop; this year appears to be an "off year."

R. J. KENDALL.

Austin, Texas, June 3, 1883.

Cross Bees.

Why are my Italian bees so very cross this spring? One colony gave a swarm on the 9th of this month, which went back to the old stand without clustering. The weather set in cold and rainy, and they did not come out again until the 17th. They clustered on a little willow, close to the ground, so that I could not saw it off. I set the hive close up to the cluster, and took a turkey wing and commenced to brush them on the alighting board. I had only made one stroke of the brush, when about a quart went into the hive, and about two quarts into my face and hair. You may judge the result; as many stung me as could get a chance. A neighbor of mine had been wanting for several days to see the bees swarm, as it was a new thing to him. He was standing close by—they made a dive for him, and gave him a fearful stinging; he had a little dog with him, and the bees gave them both a fight. My neighbor ran away and the dog followed; both were covered with bees. He ran into a milk house, and so did the dog. Such a fight I never witnessed before. The few I got in front of the hive induced the balance to go in all right. I was waiting for them to quiet down, so as to move the hive where I wanted it to remain. All at once they came rushing out and went back to their old stand again. It commenced to rain that evening, and kept cold until Sunday; about noon the sun came out and out came the bees; they soon clustered on the bottom of a little apple tree, down close to the ground, with a good many on the ground and in the grass. I took a dipper and my turkey wing and commenced business again, but was prepared for them that time. I made a veil and had it on, and a pair of gloves. So I got them all in, without receiving a sting, but I should have got a great many, except for the protection. They have been in the hive 3 days without a fly. The weather has been cold and rainy ever since; only stopping a little while at night to get a good start for the next day. I would have had 4 or 5 swarms this month, if the weather had been favorable. I have fed the new swarm to-day; they keep up a constant roar, as though all was right. I have heard a queen piping in the old hive ever since the swarm came out, but only hear one. Is that any indication of swarming soon again? I am a beginner in the business, and want to learn all I can. I have read Quinby's and Cook's Manuals, and, with the aid of the BEE JOURNAL, I think I can get through.

R. A. ROSSER.

Nelsonville, O., May 23, 1883.

[We expect the bees were hybrids, notwithstanding you call them Italians. Several have reported similar results when hiving hybrids under certain conditions. You should have had a good smoker at hand, and, by its use, saved such a calamity as the one you have described above. The unpropitious weather which had kept them prisoners so long, with no chance to be gathering honey, had doubtless made them angry, and ready to fight at the least provocation. Some bees seriously object to being brushed even with a turkey wing, and, when they are thus excited, will show their anger by acting just as your bees have done.

The piping of the queen, which you mention, indicates that a "second swarm" is determined upon. Upon this decision, the bees prevent the first queen that issues from killing the rest, and place a strong guard over their cells, and when she comes with murderous intent, she is repulsed by the bees. This offends her majesty who utters these shrill notes of anger. If this piping is not heard within a few days after the first swarm issues, it is because the queen has no rivals, and swarming may be said to be over with that colony for the season.—ED.]

Bees Near a Roadway.

Please answer the following questions through the BEE JOURNAL:

1. Will the law compel me to move hives of bees that are standing near a line fence.

2. Will the law compel me to pay damages, if my bees sting horses that are driven on the opposite side of the fence.

I have had my bees where they now stand for the past 13 years, and without any trouble. But, this year, a drive-way has been made close to the fence, for the purpose of getting to a back lot. The fence is a tight board fence between 6 and 7 feet high. Neighbors also use this drive-way to work land on another farm. I am doing all that I can to control the bees, having moved some of the crossest from near the fence a distance of two miles.

JAS. B. TUMBER.

Warren's Corners, N. Y.

[Not being a judge, the law points we cannot pass upon, but if we owned the bees, and had any land elsewhere, they would be moved as soon as possible, so as not to have them annoyed and "worked up" all the time by passing teams, horses that are sweating, etc.—ED.]

Fully Appreciated.

The Weekly BEE JOURNAL is, to me, worth all the other bee papers put together; may you, Mr. Editor, live to see its full worth appreciated, not only at home here, but in thousands of foreign homes where the "busy bee" is kept, and where every flower is fanned by its silvery wings.

D. W. FLETCHER.

Lansingville, N. Y., May 21, 1883.

Experience of My Friend and I.

Perhaps the readers of the BEE JOURNAL would like to hear something of a friend of mine, living in the same house, who being fond of bee-culture, in the old country, continued in the new world to keep bees; not so much to make a trade of it, as to render his pastime pleasant. Accordingly the BEE JOURNAL never comes into his hands without being perused with great interest, from the beginning to the end. He tells me, that he received much information from it, especially about feeding and wintering. Last winter, making use of the hints given in the BEE JOURNAL, he succeeded in wintering his bees with but an insignificant loss of one weak colony, which he received too late in the fall to make a trial in feeding. The bees then clustered all on one side, leaving the other frame yet containing honey enough untouched, and finally died.

1. Why did the bees all gather on one side, and not move to the combs filled with honey?

My friend covered the hives, in the beginning of winter, partly with straw mats, and partly with blankets; around them he constructed a wall of chaff, a few inches in width. The hives, having straw mats kept dry; the others not, for out of the inlet often water was flowing. I concluded that the moisture inside was absorbed by the straw mats, but not by the blankets. On the 19th of May, in one of the hives, there was much noise, and many of the bees clustered all in one pile outside of the hive. Now, I thought, they would swarm. My friend laughed first at me, but in the end he prepared a hive for any eventuality. Yet the cold weather from the 20th to the 23d checked them. We had a north wind storm and rain, with snow, and it was very cold; fires was started in the stoves once more.

2. Do bees really sometimes swarm in the end of May?

A Bingham smoker gave full satisfaction to my friend, who was overjoyed with it and the Bingham & Hetherington honey knife. Our bees are very "gentle and good-natured;" they never sting me, though I watch them closely in their busy movements. Once, my friend was in danger. One swarm of bees, which he had received from a neighbor, and which were not attended to properly, was to be transferred into a new hive. But the frames were all connected by combs, which the bees had constructed, making the replacing difficult. My friend, nevertheless, was determined to separate them. In cutting the connected combs asunder, he destroyed some brood; then there was humming about the ears. Hence, my friend received a few stings. Not so I. As we could not use the smoker—there was straw, etc., near—we smoked tobacco, and this so much, as to make us quite dizzy. Alas! never shall we do that again; we shall certainly use the Bingham smoker.

FRANK.

Seneca Co., O., May 23, 1883.

[1. The bees clustered on one side in order to utilize the heat of the cluster; then, as they were few in numbers, it became too cold for them to go to the honey, and hence starved, with "plenty" close to them, but out of their reach.

2. Yes; if the weather is propitious, and they are strong in numbers.—ED.]

The "Big Damp," by the Floods.

We have had some very valuable yet unprofitable experience during the late "big damp" in the Ohio Valley, by the washing away of almost all the bees in the neighborhood. Several boxes and hives were caught during the flood, though quite cold weather, with bees clustered at the edges of comb out of the water, wet and chilled, but with little care they were saved. One man saved 2 out of 8 colonies, after they had been floating in the water four days. Another saved 8 out of 18, after floating six days, and only kept from floating away entirely by houses and high fences surrounding them; some were right side up, some bottom up, and others on their sides; yet almost all these are now in good condition, having built up rapidly on our abundant early spring fruit-bloom. Some of them I have transferred for the parties to get rid of the badly soiled combs, the cells of which were well filled with mud and sand. My bees were saved by first placing them on the roof of the bee house, which subsequently floated away, but not until after I had transferred my bees to the roof of my office, where I saved them all, in good condition. All colonies taken from the water were more or less damaged, by depletion in numbers, and soiling of combs. Bees in Southern Ohio, above high water mark, and those kept out of the water, are in excellent condition. They wintered well, coming through, well stocked in bees and capped brood, and have built up fast during the spring, on early fruit bloom, which was very abundant. Now we have a most flattering prospect of white clover blossoms, scattered with unsparing hand by a wise. over-ruling Providence. Our honey harvest, this year, cannot be other than excellent. I look for my BEE JOURNAL as for my breakfast, with a keen appetite.

R. A. MOLLYNEAUX.

New Richmond, O., June 1, 1883.

Peculiar Season for Bees.

The past month has been the worst May I have ever known for bees, and as a consequence, bees are in poor condition. Mine are in fully as bad shape, if not worse, than they were last year at this time, and vegetation is at least a week later than then; and we thought last year was as bad as a season could be. The season will have to be a very peculiar one from this time on, to allow us to obtain an average crop of honey.

O. O POPPLETON.

Williamstown, Iowa, June 1, 1883.

Cold and Backward Season.

The season is very cold and backward here. We had another frost last night. Fruit is much injured. Fruit and early forest bloom have amounted to almost nothing for the bees, on account of continual cold and rain. Feeding is now the rule, in my apiary, to ward off starvation, though the hives contained very ample stores in the fall. The colonies, however, are nearly all very strong; most of them having clustered outside. Have already had 4 swarms. Winter and spring loss is less than 10 per cent. The season is about two weeks late.

H. D. BURRELL.

Bangor, Mich., June 1, 1883.

"Bees and Honey," for Beginners.

The majority of those who buy bees of me, depend upon me to get them a reference book. "Bees and Honey" more nearly "fills the bill" than any work I know of, especially for those who buy that they may supply their own family with honey, and not to make a business of it. It combines cheapness, quality and quantity in the right proportions. To one who has purchased several colonies, I usually have donated a copy of it.

Lincoln, Neb. G. M. HAWLEY.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

Our Premiums for Clubs.

Any one sending us a club of **two** subscribers for 1 year, for the Weekly, with **$4**, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For **three** subscribers, with **$6**, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For **four** subscribers, with **$8**, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For **five** subscribers, with **$10**, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

☞ Do not send coins in a letter. It is dangerous and increases the postage unnecessarily. Always send postage stamps, for fractions of a dollar, and, if you can get them—*one-cent* stamps; if not, any denomination of postage stamps will do.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Special Notice.—We will, hereafter, supply the Weekly BEE JOURNAL for one year, and the seventh edition of Prof. Cook's Manual of the Apiary, bound in fine cloth, for **$2.75**, or the Monthly Bee Journal, and the Manual in cloth for $1.75. As this offer will soon be withdrawn, those who desire it should send for the book *at once*.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Bingham Smoker Corner.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent post-paid for **$1.75.** Address,

BINGHAM & HETHERINGTON,
Abronia Mich.

All Excelling. — Messrs. Bingham & Hetherington, Dear Sirs:—I am now selling your Smokers almost exclusively. You are excelling yourselves in smokers all the time.

Respectfully, J. G. TAYLOR.
Austin, Texas, May 10, 1883.

Cyprians Conquered.

All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's "Conqueror Smoker" did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham.

G. M. DOOLITTLE.
Borodino, N. Y., Aug. 15, 1882.

During the following three months, Bingham Smokers will be sent post-paid, per mail, on receipt of the following prices:

The "Doctor"..	(wide shield)—3½ in. fire tube,		$2.00
The Conqueror	(wide shield)—3 in. fire tube,		1.75
Large...........	(wide shield)—2½ in. fire tube,		1.50
Extra...........	(wide shield)—2 in. fire tube,		1.25
Plain............	(nar. shield)—2 in. fire tube,		1.00
Little Wonder..	(nar. shield)—1¾ in. fire tube,		.65
Bingham & Hetherington Uncapping Knife..			1.15

With thanks for letters of encouragement, and the absence of complaining ones, we tender to our thirty-five thousand patrons our best wishes.

Very Respectfully Yours,
BINGHAM & HETHERINGTON.
Abronia, Mich., June 1, 1883.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

☞ Do not let your numbers of the BEE JOURNAL for 1882 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

☞ May we ask you, dear reader, to speak a good word for the BEE JOURNAL to neighbors who keep bees, and send on *at least one new* subscription with your own? Our premium, "Bees and Honey," in cloth, for one *new* subscriber to the Weekly, or two for the Monthly, besides your own subscription to either edition, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

JUST OUT!

New circular and price of Bees and Queens. Also, STENCILS for bee-keepers' use.

JOS. M. BROOKS,
13C6t Columbus, Ind.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL.
Monday, 10 a. m., June 11, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The nominal price of extracted is 7c. for dark and 9c. for light—here. The supply is abundant and sales are slow.

BEESWAX—None in the market.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY.—The market for extracted honey is lively, and the demand exceeds the arrivals. Our stock is small and we are in danger of having sold out every day. We pay 7@10c. for good honey on arrival, the latter price for choice clover. There is a small demand for comb honey, and prices nominal.

BEESWAX.—Arrivals of beeswax are plentiful. We pay 35c. for a good article on arrival.

CHAS. F. MUTH.

Quotations of Commission Merchants.

NEW YORK.

HONEY.—Best clover in 1-lb. sections (no glass) 22@23c.; in 2-lb. sections (glassed) 18@20c. Fair quality. 1 and 2-lb. sections, 17@18c Extracted, white, in small barrels, 10@11½c.; buckwheat, 8@9c.

BEESWAX.—Is more plentiful. Prime yellow sells at 37½@38½c.

H. K. & F. B. THURBER & Co.

CHICAGO.

HONEY.—Prices declining. Holders are enxious to sell, and the prices vary very much.

BEESWAX—35@36c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—Stocks and the demand are both light. More or less difficulty would be experienced in filling a large order for a straight lot.

White comb, 14@17c.; dark to good, 11@13c.; extracted, choice to extra white, 8½@9½c.; dark and candied, 5@7½c.

BEESWAX—Wholesale, 27@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY.—Strained salable at 7@7½c; comb sold in a jobbing way only—old 10@14c, and new 15c.

BEESWAX.—Sold mainly at 33@34c—latter for prime.

W. T. ANDERSON & Co., 117 N. Main Street.

CLEVELAND.

HONEY.—There is a moderate sale for best white 1-lb. sections at 18c, occasionally 19c, but 2 lbs. are not called for. Extracted is no sale at all.

BEESWAX—Not offering.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—Our supply is gone; we have none to quote.

CROCKER & BLAKE, 57 Chatham Street.

NOTICE.

We have just completed the largest and best lot of Smokers ever manufactured. Prices by Mail:

2 inch....	Double Blast.................	$1.50
2 "	Single "	1.00
2½ "	Double "	1.75
3½ "	Single "	2.00

Special inducements to those who buy to sell again.

THE BEST BEE BOOK

"Of all the books on bee-keeping, QUINBY'S NEW BEE-KEEPING stands pre eminently at the head, in my opinion." Sincerely Yours,
April 11, 1883. G. M. DOOLITTLE.

Sent by Mail, Post-paid, for $1.50.

L. C. ROOT & BRO., Mohawk, N. Y.
19Atf

DUNHAM COMB FOUNDATION.

Twenty-five lbs. or less, 55c. per lb.; over 25 lbs. 52c per lb. Extra thin and bright (10 sq. ft. to the lb.) 58c. Wax worked for 10c. per pound.
24A5t **F. W. HOLMES,** Coopersville, Mich.

HOLY LAND QUEENS.

Untested, ready about June 10. Single Queen, in this month, $1.25; six or more, $1.00 each; no tested Queens, this month.

I. R. GOOD, TULLAHOMA, Coffee Co., TENN.
23A4w

BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN.
Editor of the Weekly Bee Journal.
925 West Madison Street, Chicago, Ill.

It contains 160 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey Bee, and at the same time produce the most honey in its best and most attractive condition.

Appreciative Notices.

A neat and abundantly illustrated hand-book of apiculture.—American Agriculturist, N. Y.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Tenn.

Contains all the information needed to make bee-culture successful.—Eagle, Union City, Ind.

Just such a work as should be in the hands of every beginner with bees.—News, Keithsburg, Ill.

Valuable for all who are interested in the care and management of bees.—Dem., Allegan, Mich.

Engravings are fine. Gotten up in the best style, and is cheap at the price.—Farmer, Cleveland, O.

It comprises all that is necessary for successful bee-culture, save experience and good judgment. —Daily Republican, Utica, N. Y.

Gives minute details for the management and manipulations necessary to make bee-keeping a success.—Col. Valley and Farm.

Written in an interesting and attractive manner, and contains valuable information for all readers, even though they be not directly interested in the care of bees.—Sentinel, Rome, N. Y.

It is a valuable and practical book, and contains a complete resume of the natural history of the little busy bee, as well as of all that one needs to know in their care and management.—Chicago Herald.

Contains a vast fund of information in regard to bee-culture. He who would keep abreast of the times must keep posted in all the improvements in his line. We advise all interested to get a copy of this book.—Daily Times, San Bernardino, Cal.

It embraces every subject that will interest the beginner. It describes all the newest discoveries in the art by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive form. It is embellished with beautiful engravings, and is the most perfect work of the kind, for the price, that has ever come under our notice.—Farmer, Lancaster, Pa.

PRICE—Bound in cloth, **75 cents;** in paper covers, **50 cents,** postpaid.

THOMAS G. NEWMAN,
925 W. Madison St., Chicago, Ill.

$4.00 **$4.00**

One Hundred Colonies Bees.

As our store business demands all our time, we have decided to close out our apiary at **$4.00 per colony.** Will extract most of our honey, and commence shipping about the 1st of August. Bees in my double-wall hive, size of frame, 14x12, with side and top storage for 75 pounds of honey, also 25 3-comb nuclei double wall, takes hive frame, at $2.00 each. Orders booked and filled in rotation. Send by Registered letter.

24A1t Address, **J. E. MOORE,** BYRON, N. Y.

E. T. LEWIS & CO., Toledo, Ohio,

Manufacturers of the U. S. STANDARD Honey Extractor (new improvements), and all other Apiarian Supplies. Send for circular. 17A 5Btf

BEE-KEEPERS, before ordering your

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E. Kretchmer, Coburg, Iowa.
13A22t5B4t

OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

VOL. XIX. CHICAGO, ILL., JUNE 20, 1883. No. 25.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

The Standard Langstroth Frame.

Mr. M. M. Baldridge, St. Charles, Ill., sends us the following for publication in the BEE JOURNAL:

It has been shown on several occasions, by the very best of evidence, that the correct length, outside measure, of the "standard Langstroth frame," is 17⅜, and not 17⅝ inches. The evidence is the 3d revised edition of Mr. Langstroth's book; and, I will now add, *all subsequent editions of said book*. As an attempt has been made by some to show that Mr. L. has stated somewhere, in print, that the "standard Langstroth frame" is 17⅝ inches long, outside measure, I will at present simply deny the *truth* of such an assertion. And, while I am on this subject, I may as well also deny that Mr. L. has given, "in a prominent periodical," any *reasons* (?) for changing the outside length of the standard Langstroth frame from 17⅜ to 17⅝ inches. Now, if any one thinks otherwise, please come right along with the *proof*.

In an editorial note on page 272, we stated that "Mr. Langstroth had publicly given his sanction to the frame 17⅝ inches long." And, on page 251, Mr. Alves states that "Mr. Langstroth himself has approved the change to 17⅝ inches.

As these statements can be so easily *sustained*, and to save any labored arguments, we will here give the *proof:*

In the BEE JOURNAL for December, 1878, page 427, we published an article written by Mr. Baldridge on this subject, in which he says:

"The outside length of the [Langstroth] frame is 17⅜ inches, instead of 17⅝ inches, as given by Messrs. Newman and Root. This is an important mistake, as it destroys the interchangeableness of the frames."

Desiring to have Mr. Langstroth decide the point, we sent him an advanced proof sheet of the article, for his decision. His answer was unequivocal, and as follows:

"Mr. Baldridge is in error in supposing that such slight variations as he notices, destroy the interchangeableness of the frames. Considering the accuracy which may be obtained in making the frames stiff and perfectly square, *I prefer the measurements of Messrs. Newman and Root.*"

As before stated, we said "Mr. Langstroth has given his *sanction* to the frame 17⅝ inches long;" and Mr. Alves asserted that "Mr. L. had himself approved the change." If the quotation given does not "sanction" and "approve" the change, we do not know what language Mr. Langstroth could have used to have *approved* and *sanctioned* it!

Mr. Langstroth's attention was called to the change of ¼ inch in the length of his frame, from the figures given in his book, and he promptly endorsed the change, and wrote for publication in the AMERICAN BEE JOURNAL: "I prefer" it.

The arguments *against* the change, and Mr. Baldridge's assertion that it was "an important mistake," because "it destroys the interchangeableness of the frames," were also submitted to Mr. Langstroth, and he immediately wrote the reply for publication in the BEE JOURNAL (vol. 14, page 427), "Mr. Baldridge is in error!"

If this emphatic language of "the author of the book" and "inventor of the frame" does not settle the point—then it cannot be settled; and to further *discuss* the matter is but a *farce!*

The last edition of Mr. Langstroth's book (the fourth) was published about 25 years ago; since then, some have thought that a modification of ¼ of an inch in the length of his frame was to be desired, and Mr. L. has publicly endorsed that change. Now, therefore, to ignore this, his latest decision, made in the light of *the ever-living present*, and to persistently appeal to a book (be it one ever so valuable) a quarter of a century old, and therefore, "behind the times," not even hinting at many of the grandest inventions and improvements inaugurated during the past 25 years, is *unprogressive!* Such a course is something akin to that of going back to the "dark ages of the past," to define the courses and size of the planets, while ignoring the discoveries of more recent astromomers, made in the light of the *present* progressive age!

Salt for the Apiary.

The *Grange Bulletin* has the following advice about the generous use of salt in the apiary:

Use salt freely about your hives. Sprinkle a little water with plenty of salt outside, and in the hives, when the bees are troubled with ants. Good salty brine is of much value in destroying moth eggs about hives. Rock salt is good to make brine of, to prevent foul brood, which sometimes destroy whole apiaries, and is to be much dreaded by the apiarist. It is better to use an ounce of preventive than a pound of cure. Use small troughs for the brine.

Backwardness.—Complaints are now quite numerous about persons not receiving hives, sections and queens after ordering them of many of our most reliable dealers and breeders. The *backward* spring weather has prevented queen rearing, and is a sufficient excuse for not receiving queens. And the *backwardness* of bee-keepers in not ordering hives and sections earlier, is the cause of much inconvenience to them and others. Many rush in orders for such at the same time (some even by telegraph), till the capacity of all supply dealers is exceeded. This should teach a valuable lesson for another season—to get such things early—in time to prevent the possibility of waiting for them.

Bees, Fruit and Flowers in Virginia.

In the Winchester, Va., *Times*, we notice the following concerning Virginia's bee-master, Mr. E. C. Jordan :

"We have received some very fine strawberries from Mr. E. C. Jordan, the proprietor of Jordan's White Sulphur Springs. He regrets that his mammoth variety is not yet ripe, but if they are any larger than the fine ones he sent us, strawberries can no longer be classed among the small fruits. 'In the course of a few days,' he writes us, 'we will have them by the bushel. Come out and see us, our bees, flowers, and strawberries.' Thank you, sir, 'if we know ourselves, and we think we do,' we will be there to see the place so well-known for its beauty, and to partake of its equally famous hospitality."

The editor of the BEE JOURNAL would be delighted to spend a short time at the "White Sulphur Springs," this summer, for recreation, but we fear he cannot be spared from his "desk" and everlasting round of duties. Nothing would give him greater pleasure than to accept of Mr. Jordan's many pressing invitations to spend some time among the

Bees and berries,
Plums and cherries;
Birds and bowers,
Fragrant flowers;
In the sunny,
Vale of honey;
With birds that sing,
At Sulphur Spring –
In "Old Virginny!"

When we we retire from the tripod, Mr. Jordan may expect us to settle down in that locality—to enjoy "old age" with the birds, bees and flowers of the sunny South—that is the height of our ambition.

* * *

Humble-Bees and the Clover.

Prof. C. H. Fernald has written the following article for the Maine *Farmer* on the "Humble or Bumble-bees, their habits and uses," which will be of much interest to many of our readers. The fertilization of flowers, both by these bees as well as by the *Apis Melifica*, or honey bees, and other insects, is a subject of considerable interest to farmers as well as to bee-keepers. Prof. Fernald remarks as follows :

"The Humble-bees, or Bumble-bees as they are sometimes called, are among the largest and most showy of our Maine Hymenoptera, and are extremely useful to the farmers for the work they do in cross fertilizing red clover. It is well know that the flower tube of this plant is so long that few insects have a sufficient length of tongue to reach the nectar in the nectary, and, therefore, it is not often frequented by honey bees and other nectar-loving Hymenopterous insects. We are, therefore, greatly indebted to the Humble-bees, for their visits to the clover, their great hairy bodies become more or less powdered with the pollen, and when they visit other clover heads their flowers are fertilized by the pollen which the Humble-bees have brought from the flowers previously visited.

It has been claimed, and without doubt correctly, that unless cross fertilization is effected in some way, the clover will run out. Darwin covered 100 flower heads of red clover with a net to keep the insects from them, and not a single seed was developed, but from 100 heads on plants growing outside, which were visited by bees, there were obtained 2,720 seeds. Experiments, of a similar character have been repeatedly performed both in Europe and in this country, and with like results. In all my observations I have scarcely ever seen any other insects visiting red clover than Humble-bees.

These insects are pretty generally distributed over the world, being found in both North and South America, in Europe, Asia and Africa, but not in Australia and New Zealand. It is in northern latitudes that they thrive best, and they even occur in the most northern regions to which man has penetrated.

In Australia there are no native insects adapted to the cross fertilization of red clover, and it has been attempted to introduce Humble-bees into that country for this purpose, but with what results I have not yet learned.

There are four different kinds in a colony of Humble-bees, the large females or queens, the small females, the workers and the males. Only the queen lives over the winter, and she hibernates either in the nest or under fallen leaves, or in some protected place. When the warm days of spring come, these large females, or queens, may be seen flying from place to place, crawling in and out of places, around and under stumps and stones, hunting for some place in which to make their nests.

When one of these queens finds a suitable place, as a deserted nest of a field mouse, or some hole under a stone or stump, she at once collects a small amount of pollen, which she mixes with honey, making a more or less sticky mass which she sticks into the pollen basket on the outside of the hind leg, and in which it is carried to the nest. As soon as a small mass of this food is collected, the queen deposits several eggs in it without order, and without even constructing any cells, but she continues the work of collecting pollen and laying eggs until the first brood emerges. As soon as the eggs hatch, the young begin to eat of the mass of food which surrounds them, thus enlarging their cavity gradually until thay reach their full growth as larvæ, when they spin a silken wall around themselves, lining the cavity which they have excavated in the pollen mass. The old bees close up these cells with a thin layer of wax, and the young transform into pupae, and in due time change into the perfect stage and cut their way out, when they are ready to assume their duties as workers, small females, males, or queens, according to their individual formation.

In the spring and early summer, only the large females are to be seen abroad on the wing, but the first brood consisting of workers only, as soon as they emerge, at once take upon themselves the work of the nests and the collecting of pollen and honey, while the queens remain in the nests. After this time, only small bees are to be seen visiting the flowers, and these are the workers.

As the queen continues prolific, more workers are added, and the nest is rapidly enlarged. About midsummer, eggs are laid which produce both small females and males. It is supposed that they pair near the end of the season, and as a result, these small females lay eggs from which the queens are developed. It has been proved that all the eggs laid after the first of September, produce the large females or queens, and as the males are still in the nest, the queens are impregnated in the air after the manner of the honey bee. On the approach of cold weather all the Humble-bees die except the queens, of which there are now several in each nest. These queens hibernate during the winter, and in spring they revive to repeat another cycle as described.

Twelve different species of Humble bees belonging to the genus *Bombus*, are known to inhabit New England, and of these I have taken five in Orono.

I am not aware that these insects are in any way injurious, but from the above showing they are of immense value in cross fertilizing plants, and should be protected. Mowing machines and horse rakes destroy their nests when run through them, but this should be avoided when possible.

It is true that they sting upon severe provocation, as when one attempts to destroy their nests, but who wouldn't fight for their own homes and firesides ?

* * *

Nameless.—It is surprising that any one should be so careless as to forget to give their name when sending money in a letter. We have a bundle of such letters in this office (each one contains money for books or Journals), and, as they have no name signed, it is impossible to fill the orders or communicate with the writers. When we have some clue, either by post mark or post office address given, we usually find out by writing there either to some subscriber, or to the post master —but with these in this bundle we have no clue, and must wait until the writers shall give us their names and addresses. To all we would say—be careful to sign your names, and give your Post-Office, County and State.

Bees in Africa and the Kafirs.

The bees of Africa, especially of the Southern portion, near the Cape of Good Hope, are as much more vicious than the Cyprian bees, as the Cyprians are crosser than the Italians, if we may credit the testimony of a correspondent of the *London Nature*, who relates the experience of himself and his two servants (one a Kafir and the other a colored Malay), which he describes as follows:

> I keep two apiaries at a considerable distance from each other, to one of which my gardner, a colored Malay, attends, and to the other a Kafir laborer. At first they were generally stung when passing too near the entrance of a hive, but now they pass and repass with impunity. They work with the bees more frequently than I do, and yet when either of them assists me in his own apiary, he receives more stings than I do. This I ascribe to the gardner's using snuff in his mouth very freely, and to the Kafir's very pronounced odor.
>
> To test the recognition of the bees, I once requested the Malay and the Kafir to change clothes with each other, and wear thick veils over their heads and faces. They did so, and assisted me first in the apiaries to which they were respectively in the habit of attending, with the result that they received no stings, but when either began to work with the bees in the apiary he usually did not attend to, he was so stung about the hands that he had to beat a hasty retreat, while I remained uninjured, although not veiled. The two men are almost of the same size and build, so that if the bees had any power of general recognition, they would probably (as some of the other servants did) have mistaken the one for the other. I can, therefore, only account for the conduct of the bees by the unpleasant, and to them strange, odor. At my request the gardner discontinued the use of snuff in his mouth for some time, and during that time he was not stung more than I was, while working with the bees; but if the Kafir stands before the entrance of an unaccustomed hive, he is remorselessly stung.
>
> I may add that Cape bees are very much more vicious than European ones seem to be, and that, if not skillfully handled, they will unmercifully sting their most familiar friends. On one occasion, a bunch of carrots was left near the gardner's apiary, which so enraged the bees that they stung him and everyone else they came across, and very nearly stung a cow to death at a distance of about a hundred yards from the apiary; and on another occasion a horse, still wet with sweat, trespassed too near a hive, with the result that the whole apiary was in uproar, and some of my children and servants were stung, the chief victim being a Malay girl, who used to apply quantities of scented pomatum to her hair, and who was severely stung on the head.

Mr. Romanes continues his narration thus:

> "Again, many instances might be quoted, such as that given by Gueringius, who allowed a species of wasp, native to Natal, to build in the doorposts of his house, and who observed that, although he often interfered with the nest, he was only once stung, and this by a young wasp; while no Kafir could venture to approach the door, much less pass through it."

It does not appear whether any white stranger was ever stung, and the only inference that could be reasonably drawn from the conduct of the wasps, is, that they disliked the odor of Kafirs, which, as is well-known, is peculiarly disagreeable. If a particular Kafir had been in the habit of passing through the door, the wasps would probably have become accustomed to his scent, in the same way as a colony of bees, upon the testimony of Sir John Lubbock, became accustomed to the scent of eau-de-cologne repeatedly dropped at the entrance of their hive.

Keep the Bees at Work.

There is at present every indication that the honey harvest this year will be very large. Honey-producing plants, trees and shrubs are full of liquid sweetness, and with fair weather the crop will be an exceedingly large one. Mrs. L. Harrison in the *Prairie Farmer* remarks as follows on this and other important subjects:

> No one can now tell what the harvest will be, but there is a great growth of white clover, and if the clerk of nature's laboratory works in our favor, we shall secure an abundant harvest, for the workers are many and the fields white. But the watchmen must be faithful and see that every tenant pays his rent; no "loafing" must be allowed, and "hanging out" stopped instanter. Some bees will wax fat, and loaf for weeks, getting ready to swarm, if allowed to do so. There is no need of waxing fat, when they are to be supplied with foundation for their combs.
>
> There should at all times be plenty of surplus room, not too much, but enough to accommodate all the bees. Sometimes bees hang out because there is too little ventilation, or they are too warm. They should be cooled by shading, given more air and surplus room. If all these fail, smoke them in, and if they cluster out again, pour honey on them, stir them up with a spoon, and then run for life, for they will be on the rampage. As a last resort, prepare a hive with frames of comb or foundation, and lift off the surplus boxes on to it, remove the hive and place the prepared hive where the old one stood. All the bees returning from the fields enter this, and the bees on the combs brushed in front of this, together with the queen. The combs of honey and brood can be given to small colonies.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., June 18, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The nominal price of extracted is 7c. for dark and 9c. for light—here. The supply is abundant and sales are slow.

BEESWAX—None in the market.

Al. H. Newman, 923 W. Madison St.

CINCINNATI.

HONEY.—The market for extracted honey is lively, and the demand exceeds the arrivals. Our stock is small and we are in danger of having sold out every day. We pay 7@10c. for good honey on arrival, the latter price for choice clover. There is a small demand for comb honey, and prices nominal.

BEESWAX.—Arrivals of beeswax are plentiful. We pay 35c. for a good article on arrival.

Chas. F. Muth.

Quotations of Commission Merchants.

NEW YORK.

HONEY.—Best clover in 1-lb. sections (no glass) 22@23c.; in 2-lb. sections (glassed) 18@20c. Fair quality, 1 and 2-lb. sections, 17@18c Extracted, white, in small barrels, 10@11½c.; buckwheat, 8@9c.

BEESWAX.—Is more plentiful. Prime yellow sells at 37½@38½c.

H. K. & F. B. Thurber & Co.

CHICAGO.

HONEY.—Prices declining. Holders are anxious to sell, and the prices vary very much.

BEESWAX—35@36c.

R. A. Burnett, 161 South Water St.

SAN FRANCISCO.

HONEY—Stocks and the demand are both light. More or less difficulty would be experienced in filling a large order for a straight lot.

White comb, 14@17c.; dark to good, 11@13c.; extracted, choice to extra white, 8½@9½c.; dark and candied, 5@7½c.

BEESWAX—Wholesale, 27@28c.

Stearns & Smith, 423 Front Street.

ST. LOUIS.

HONEY.—Strained salable at 7@7½c; comb sold in a jobbing way only—old 10@14c, and new 15c.

BEESWAX.—Sold mainly at 33@34c—latter for prime.

W. T. Anderson & Co., 117 N. Main Street.

CLEVELAND.

HONEY.—There is a moderate sale for best white 1-lb. sections at 18c, occasionally 19c, but 2 lbs. are not called for. Extracted is no sale at all.

BEESWAX—Not offering.

A. C. Kendel, 115 Ontario Street.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—Our supply is gone; we have none to quote.

Crocker & Blake, 57 Chatham Street.

* * *

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

* * *

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

CORRESPONDENCE

For the American Bee Journal.

At What Age Do Bees Gather Honey?

G. M. DOOLITTLE.

The above heading may be thought by some to be of little interest, but as it has much to do with the surplus honey we get, I thought a few words on the subject would not be amiss. Many seem to suppose that the bee is capable of going to the fields to gather honey as soon as hatched, or in three or four days at least, but some facts prove that they do not do so. Bees may be forced to go to the fields for pollen and honey at the age of 5 or 6 days old, but when the colony is in a normal condition, as it always should be to store honey to the best advantage, the bee is 16 days old before it gathers honey. If we take combs of bees just hatching, and place them in a hive without any bees, as is frequently done to introduce a valuable queen, we will see young bees not over 5 or 6 days old go to the fields, being compelled to do so for water, pollen, etc., because there is none of older age to go; but this does not prove that bees of that age usually do so any more than the experiment of feeding 20 pounds of honey to bees confined to the hive before one pound of wax was produced, proves that it always takes 20 pounds of honey to produce one pound of comb. I have conducted ,two experiments since I kept bees, to ascertain the age at which bees gather the first honey, and as each proved the same, I believe 16 days to be the time when the bee brings her first load of honey, when the colony is in a normal condition.

The experiment which I tried was this: A black queen was removed from a colony, and an Italian queen introduced in her place about the middle of June. The date was marked on the hive, and as the 21st day thereafter arrived, a careful watch was kept to see when the first Italian bee hatched. When the first Italian had emerged from the cell, a careful watch was again kept of the hive to see when the first Italian took its flight. This happened about 2 p. m., on the eighth day after the first Italian was found hatched, when a few came out for a play spell, but in an hour all had returned, and none but black bees were seen going to and from the hive. As the days passed on the numbers increased at each play spell (about 2 o'clock), but none having the Italian markings were seen, except at these play spells, till the 16th day after the first Italian hatched. At this time a few came in with pollen and honey, commencing to work at about 10 a. m. After this, the number of Italian honey gatherers increased while the number of blacks decreased, until on the 45th day after the last black bee was hatched, when not a black bee was to be found in or about the hive. If the above is correct, and I believe it is, it will be seen that the eggs, for our honey gatherers, must be laid by the queen 37 days before our main honey harvest, if we would get the best results from our bees; as it takes 21 days from the time the egg is laid to the time the bee emerges from the cell, and this added to the 16 makes the 37 days. The above is applicable to any portion of the country, where a certain flora produces the larger portion of the honey crop. To be sure, the bees from the time they are three days old, help to perform the labors in the hive, such as building comb, feeding the larvæ, evaporating nectar, etc., hence are of much value toward securing the crop of honey, if we have plenty of bees besides, over 16 days old, but otherwise all hatching after the middle of the honey harvest are of little use.

Another thing I ascertained by these experiments, which was that the bees which gather the honey are not the ones which deposit it in the cells. I was reading in a bee paper, not long ago, how the loaded bees from the field carried their honey easily to the top of a four story hive. This was used as an argument in favor of placing the empty combs on top of the full ones, instead of raising up the second or third story and placing them between full combs, on the tiering up plan. As far as the loaded bees are concerned, it makes no difference, as will be seen when I state that on the 15th day after the first Italian hatched, when none but black bees were going in and out at the entrance, I found by taking off the cover and examining the sections, that scarce a black bee was in them, but all were Italians, which were at work there, building comb and depositing honey. After this I used an observatory hive containing but one comb. In this I also had black bees as field bees, and young Italians for the inside work. By watching the entrance through the glass, I could see the loaded bees come in, and when one came on the side next to me, I could easily see what it did with the load of honey. The bee would pass along on the comb till it came to a young bee, when it would put out its tongue toward the young bee. If this bee had no load, it would take the honey, but if it had, our field bee must try again till one was found that could take the load, when it was given up to it. The field bee then rested a little while, when it would go for another load. Thus it will be seen that any entrance leading direct to the surplus arrangement, as was formerly made in the Langstroth hive, is of no use, but, on the contrary, a positive damage, as in cool nights it causes the bees to leave the boxes, from allowing too much cold air to enter them. To secure the best results, it is necessary to be fully acquainted with all of these minor points of interest about the bees, so that we may combine them all, and bring them all to bear on that which will produce us the most honey.

Borodino, N. Y.

Country Gentleman.

Using a Standard Frame.

W. Z. HUTCHINSON.

One can now scarcely pick up a bee paper without finding an article with the above heading, and, although all the writers do not agree as to which frame should be taken as the standard, they do agree as to the desirability of all bee-keepers using a frame of the same size. The traffic in bees is becoming quite large, and with so many different-sized frames as there are now in use, the purchaser of bees frequently not only has to perform the disagreeable tast of transferring them, in order that they may be in hives like his own, but the discarded hives and frames are seldom of any value, except for kindling wood. Were some frame adopted as the standard, and used by all bee-keepers, the supply business would be greatly simplified and made more profitable, both to the manufacturers and the consumers. Hives, frames, etc., could be manufactured in large quantities, and, at a corresponding lower price, and the delays caused by having to wait while some odd sizes are being manufactured, would be entirely avoided. Experiments, especially those in regard to wintering bees, would be more conclusive and satisfactory, were all frames of the same size, as success or failure could not be attributed to the difference in the size or shape of the frames used.

As the majority of bee-keepers use the Langstroth frame, it is not to be wondered at, that nearly all writers upon this subject, advocate the adoption of the Langstroth frame as the standard. I have always used the American frame, which is about 12 inches square, and I have nearly 100 hives, yet I shall, this season, commence using the Langstroth frame, and another season shall discard the American frame entirely. If I cannot sell the hives and combs to some one who uses that style of hives, I shall transfer the best of the combs, melt the remainder into beeswax, and have the wax manufactured into comb foundation. I will knock the hives to pieces, and use what I can in making Langstroth hives. Heretofore I have reared queens and extracted honey, and for these purposes I regard the American frame as good as any. Now, I shall give the production of comb honey a trial, and, for this business, I am convinced that a shallow frame is preferrable. Since the Langstroth is a shallow frame, and is used by a majority of bee-keepers, I shall adopt it.

It has been many times asserted that the Langstroth frame is too shallow for wintering bees successfully in our cold, northern climate. It is asserted that in order to pass the winter safely, bees should cluster beneath their stores—as the heat arising from the cluster keeps the honey warm and in proper condition to be used. It should be remembered that when the warm air arising from a cluster of bees strikes against the covering over the frames, the heat spreads out in a lateral direction all over the upper portion of the hive, and that bees in search of food. in cold weather, move in a lateral direction between the combs just as readily as they do in an upward direction, and much more readily between combs than they will pass from comb to comb. If any one thinks differently, let him, near the close of the honey season, raise the back end of his Langstroth hive until the hive stands at an angle of 65°, when by the time that cold weather comes, the bees will practically be in a tall hive with their stores above them. Two years ago, just after the close of a very disastrous winter for bees, the editor of the AMERICAN BEE JOURNAL requested his readers to send in reports of how their bees were prepared for winter—whether they were wintered in the cellars, or out-of-doors; the kind of hives used, etc.,—and how the bees wintered. From these reports a statistical table was prepared, and one of the facts brought out, was that bees wintered with the least loss in Langstroth hives. Among other remarks the editor made the following:

"Those who have contended that that the Langstroth hive is too shallow for wintering, will be surprised to learn that the figures compare very favorably for it. Thus the percentage of losses in all kinds of frame hives is 46; exclusive of the Langstroth hive it is 51, leaving only 43 for the Langstroth, being 8 per cent. in its favor. Again, this report records the results of wintering in 521,330 hives; 211,732 of which were in box hives, leaving 309,598 for all kinds of frame hives. Of the latter, 195,957 are Langstroth—*i. e.*, shallow frames—and 113,561 of all others combined. We really think these figures settle the matter of 'the coming frame.' Had the deep frames been shown to have the advantage, the BEE JOURNAL would have been ready to advocate their universal adoption, for it has no desire to favor any but the most successful methods, hives or implements."

The reason that a shallow frame is better adapted to the production of comb honey, is that the capacity for top-storing is so increased, that the troublesome and vexatious side-storing is avoided, and the honey boxes are brought near the center of the brood nest, which induces the bees to enter more readily. Now, as a shallow frame is best for obtaining comb honey, and equally as good as any for extracted honey, and, as the Langstroth is a shallow frame, and is certainly as good a frame as any upon which to winter bees, and is now largely in the majority, I shall adopt it and do all that I can towards making it the standard frame.

There is some dispute as to the exact dimensions of the Langstroth frame, but the majority of the frames in use are 9⅛ inches deep and 17⅝ inches long. The largest manufacturers of hives, and the greatest number of them, have adopted this size, as have the editors of all of the principal bee periodicals. In Mr. Langstroth's book published 20 years ago, the length of the frames was given as 17⅜ instead of 17⅝, but the introduction, several years ago, of the one-pound section, which is 4¼x4¼ inches square, eight of which just fill a Langstroth frame when made 17⅝ inches in length, outside measurement, is a good reason for making them of that length, and Mr. Langstroth, long ago, publicly indorsed the change to 17⅝.

Rogersville, Mich.

* * *

For the American Bee Journal.

Size of Frame—Bees for Business.

JAMES HEDDON.

In reply to Mr. Alves, let me say:

1. The large majority of frame hives used in this country *are* "made" by the users.

2. Mr. Langstroth has never, to my knowledge. pronounced 17⅝ the standard, and if his fiat will make a standard at any time, I will write to him and possibly induce him to call it 17⅛x9⅛.

3. I did not object to the mongrel being well adapted to taking the one-pound sections. I only objected to that fact being used as an argument in its favor, asserting that the true standard size 17⅜ would do the same, and that the two-story broad frame system was fast falling into disrepute.

4. I maintain that when a man lays down a system in a book, and gives dimensions of all the parts of his hive connected with that system, together with good and valid reasons for such measurements, spreads that book far and wide, which results in thousands copying after his directions, that such established standard is not to be altered by wrenching from him his assent to a fractional change that can serve no purpose for the better, only annoying bee-keepers with the disastrous results of odd sizes of hives and frames.

5. What Mr. L. says on page 331, has reference solely to principles within the realm of the adaptability of the hive to the instincts of the bees, and *not* to the convenience of bee masters. I am not willing to cover the fame of this greatest of apicultural inventors with the veil of ignorance that would be thrown over him to suppose that he saw no inconvenience in the size of 40 and 9 different forms and sizes of hives and frames. He wished to impress the minds of the ignorant, that his inventions and patents did cover frames of various sizes.

6. I am in the habit of calling things by their right names, and will call the 17⅜ Langstroth the "obsolete" Langstroth frame when it becomes so. Please do not count the chickens until the eggs hatch.

On one point Mr. Alves and I agree, and that is that we both fail to see that he makes his case any stronger than he did in his first attempt. I thank Mr. A. for his eulogestic words in his closing paragraph, and hope my views on this subject may in the end serve to strengthen his former good opinions.

QUALITIES IN BEES.

In reply to the published questions of Mr. Hutchinson, I little thought of arousing my old antagonist, Mr. Demaree. It seems to me that Mr. D., in his article on page 284, merely repeats the arguments of his former article. This effort strikes the ear like a wail from the tomb of Guiteau: "Not guilty."

Bee-keepers are turning attention to the new system of breeding bees for their qualities, regardless of color or the number of their rings. Mr. Hutchinson sees the point; Mr. Alley says, "that's so;" neighbor Shirley, a breeder of close observation, feels almost out of patience with me that I should have erroneously inferred that he places any special value upon "the gold rings;" he says that he "has been through the mill," and is a firm believer in bees for business; qualities which are not necessarily inseparable from any special number of bands. Such old and excellent breeders as E. A. Thomas, are advertising a strain tested for qualities; and my orders for hybrid queens bid fair to go beyond my ability to supply. And right or wrong, the decision of bee-keepers of to-day is, "Give us bees tested for qualities." It is no wonder that Mr. Demaree considers it high time to "protest against the present tendency" of breeding for qualities, viewing the matter as he does.

I hardly thought after the late editorial scolding, that Mr. D. would again try to blacken the character of those who honestly differ from him, by using such a term as "mercenary tendency." Such statements, as well as the whole article, seem to me entirely uncalled for; and as before stated, I had no idea of again calling out the unchangeable opinions of Mr. Demaree.

> "I had supposed the shattered string
> Would prove, by now, a silent thing;
> But touch it lightly as ye will,
> It gives a mournful echo, still."

Now, let us look at the mistakes in Mr. D.'s argument. The mule argument, to begin with. Let me quote from that comic philosopher, Josh Billings. He says: "The mule is half horse and half donkey, and then comes a full stop; nature evidently having discovered her mistake." Again, "I have known the mule to behave first rate all the week for the sake of getting a good fair crack at the driver Saturday night." Again, "The best way to make a mule stay in pasture, is to turn him into an adjoining lot, and let him jump out." This animal ranks as he does because of his unchangeableness. Let us have no mule bees.

I take it that Mr. Demaree, in his experience with hybrids, has never gone beyond the first cross, or if so, merely in a hap-hazard way. The after-crosses judiciously directed by a skilled master, is where we develop as well as retain many superior traits of the character of both races, at the same time doing away with vicious qualities. Three of my present students are bee-keepers of some years experience with Italians. I propose they be consulted upon the points just referred to, as found in my apiary.

Mr. Demaree believes that every honorable breeder should be able to give a description sufficiently comprehensive to enable any one to identify his bees, and distinguish them from every race or strain of bees. Mr. D. uses the word "strain," can he, roaming the fields, distinguish bees from his apiary, from those of other strains of the same race? I can do this with mine.

Mr. D. thinks I should give a description of my bees. I did so, and it was so plainly given, and so well defined a description that he held it up to ridicule, and sought to make fun of the terms "long-bodied," and "leather-colored;" forms and colors well known to modern bee-keepers. Now he has the audacity to come forward with bees of "plumage," "white silver bands;" "slender in form," and "second-band conspicuously broad," and "generally wearing but little plumage," but that little of a "light silver rather than a golden hue." "Form slender, inclining towards orange banded." Why, if we had not known that Mr. D. was a lawyer, and were we inclined to look upon every new and novel movement as a "mercenary" dodge, I should be induced to believe that Mr. Demaree was about to advertise "Queens for Sale!"

The Legislature of Kentucky is now working on conservative ground. Kentucky always did think that her stock had reached the end of perfection; and consistent with that view, demands "purity of her stock." But will Kentucky and its able lawyer please to remember that their shorthorns and blooded horses were not handed down to us from on high, but were produced by the efforts of some one who said: "Let us have better horses and better cows; let us cross this one with that one; let us breed for qualities." Some Legislatures allowed men to bring forth the setter from the spaniel, the pointer from the setter and hound. This was not the Legislature of Kentucky.

Nature has done for the mule what Kentucky would do for all stock, and the mule stands in the stock world just where Kentucky will in the apicultural world, if she passes any such laws regarding bee-breeding, as Mr. D. alludes to in his "aforesaid" article.

Dowagiac, Mich., June 8, 1883.

[As both disputants have now had another "round," let the subject rest. Neither party can be convinced, and no good *can* come of a mere wordy war; so "give us a rest."—Ed.]

* * *

☞ The bee-keepers of Fulton and adjoining counties, are requested to meet at the Commercial House, in Astoria, Fulton, Co., Ill., on Saturday, June 30, at 2 p. m., for the purpose of organizing the Fulton County Bee-Keepers Association. By order,

COMMITTEE.

Rural New Yorker.

Queen-Rearing—A Review.

PROF. A. J. COOK.

For some time it has been known that this work was in process of preparation, and from the long and successful experience of the author as a queen breeder—an experience covering more than a score of years—the work has been eagerly looked for by all those engaged in breeding bees. Nor will its study disappoint these ardent expectations. The following is only a brief synopsis of some of the most noteworthy points:

Mr. Alley believes that the same rules of breeding apply in the rearing of bees that should govern in higher animals. Thus he urges stoutly the most careful selection of the queen and drones. He keeps his selected queen in a small hive, so that he can get eggs at once upon adding a frame of bright empty comb. Combs that have contained one or two broods are to be preferred.

The queen-cells should only be formed in very strong colonies. Such are drummed from their hives and kept queenless in an empty hive, in a cellar for ten hours. This fits them better, as Mr. A. thinks, for feeding the queens. To procure queen cells, Mr. Alley cuts the strips of comb which are filled with eggs, so narrow as to contain only one row of entire cells and two rows of half cells each. On one side, the eggs in each alternate cell of the row of uncut cells are destroyed by the use of a common match. By dipping the opposite face of this strip into melted wax and resin mixed, the comb is fastened to a frame of comb and given to the bees, which have been ten hours queenless. No other brood is given them that is uncapped, and so they form beautiful cells, in a regular row, equally spaced, and as the eggs were all laid at a known date, it is known precisely just when the queens will come forth. He never permits more than ten cells to be formed in a single colony. The bees are made queenless in the morning and given the eggs at night. Mr. A., in letting the bees escape from the hive where they have been shut in, to enter the new hive where the queen cells are to be formed, which now rests on the old stand, prevents the drones from leaving, if they are undesirable, and so gets rid of the inferior drones. If the bees cannot gather, they are fed one pint of syrup or honey twice a day. The cells are cut out on the eighth day from hatching, or the eleventh from the laying of the egg. The cells are put into a queen-nursery like that described years ago by Dr. Jewell Davis. A single colony can care for 100 of such cells. A colony is kept purposely for it.

Mr. Alley condemns the lamp nursery, though he confesses he never used it. He says it is unnatural. The same argument would condemn his whole method. He has improved upon nature. Some of our best queen breeders, like Viallon, Hutchinson and Hayhurst, use the lamp nursery and think it excellent. He says if we feed young queens in a queen nursery, they will remain there safely several weeks. But what of Berlepsch's theory that a queen unmated for three weeks is ruined?

Mr. Alley introduces the queens as virgins. But the old colony or nucleus must have been queenless three days. He uses tobacco to smoke them, and thinks this is a *sine qua non*. He also advises dropping a virgin queen into honey and then into the hive. He sometimes introduces these virgins by use of a cage, stopping the entrance—a half inch hole an inch long—with the "Good candy." The bees eat the candy, liberate the queen and accept her.

Mr. Alley never uses a colony twice in succession to form cells. After they are used once, he gives them the uncapped brood and queen of another colony which is to be used, and considers them ready again in four weeks. Thus queens are always reared from eggs; few are reared in each colony; these have all the attention, and "are almost sure to be superior queens." The nucleus or colony receiving a virgin queen should not be near the colony which is forming cells at the time, or the young queen, as she returns from mating, will enter the hive and destroy all the cells. If a queen is "balled" as she returns from mating, it is a very sure sign of the presence of fertile workers.

Mr. Alley's instruction as to introducing virgin queens is very valuable, if the method will work in other hands. In this case the colony, or nucleus, must have been queenless three days. Not so with a cell. This he says (our experience hardly sustains him) may be introduced safely immediately upon the removal of the queen.

The cell need not be fastened in a comb, but held by slight pressure between two adjacent combs. Late queens will often fail to fly unless fed a little each day. Mr. Alley is surely right, in saying that queens mate only once. He thinks a queen is almost sure to be purely mated if there are no impure bees within half a mile. I wish we were sure of this.

Caged queens, Mr. Alley says, will not be so fed by the bees, and these must be fed in the cage. Judge Andrews, of Texas, says they will always be fed. Bees in a nucleus, unless fed, will frequently swarm out. Mr. Alley secures his selected drones in this wise: He places empty drone combs in the midst of the brood nest of his best colony. As soon as eggs are laid in the cells, he gives these combs to queenless colonies. Good queens lay regularly in cells, and cut the caps from the queen cells as they come forth smoothly, and do not leave a ragged edge. He makes the strange assertion, that Italians are not a distinct race, and, further, states that they are poor nurses. M. Alley quotes wrongly, I think, from our books. I think all advise getting eggs of a known date. It is stated that worker bees never destroy a queen cell. In handling queen cells, they must never be over-heated. They will stand cold better, but ought never to be chilled.

Mr. Alley thinks it is dangerous to ship a queen right from active laying—she may be ruined. It is much safer to cage her a few days first. Cheap queens are vehemently condemned.

Mr. Alley adds to the usual rules in respect to robbing, that we ought not to feed honey but syrup. The honey odor incites to robbing. It is stated that by giving a colony brood, and a queen cell, fertile workers may be disposed of. Mr. Alley advises, none too strongly, to displace impotent queens. He remarks as wisely that most queens become unprofitable after two years. I am also glad to see that the value of spring feeding, which I have so often demonstrated in our College apiary, is fully recognized. It is no exaggeration, I think, when he states that at least ten days are thus saved. The greatest error, I think, is made in reference to wintering. He favors out-door wintering; says we must have a double-walled hive, 25 pounds of honey and a February flight. But, how often we get no February flight. With a proper cellar we may keep the bees in the hives safely from Nov. 1 till April 1.

Mr. Alley thinks that although the laws of parthenogenesis are certainly true in respect to the production of drones; yet the fact that queens are pure, he thinks not a guaranty that their drone progeny will be. His only reason given is that it is not true of birds. From very close and long observation, I believe that it *is* true of bees.

Lansing, Mich.

For the American Bee Journal.

Honey from Corn—A Reply.

W. H. STEWART.

On page 85, Feb. 7, I find a criticism by the Rev. M. Mahin, D. D., on my article as published in the BEE JOURNAL of Jan. 24, 1883.

The science of bee-culture (if it may properly be called a science) is yet in its infancy, and its growth must be step by step, as new discoveries are made. No new discoveries, mean no development of truth. A statement supported by facts is scientific. A denial without proof is just the opposite. He who attempts to set up a negative case by mere denial, unsupported by proof, lands himself in inconsistency.

I do not hold that my work is exempt from trial at the bar of reason, observation and experience. Nay, I court criticism. It leads to investigation, and investigation evolves truth. The art of bee-culture is not confined within the walls of limitation. It has had a beginning, but it can have no ending.

The sons of men that come and go,
Each have a special work to do;
These works just suited to their time
And place, are steps by which we climb.

One forward step; one higher stand,
How wide, how vast the fields expand;
Where sons of men may ply anew,
Their hand and brain some work to do.

Criticism should be conducted seriously, having but one object in view, viz.: truth, but Mr. Mahin says that my work is too absurd to be treated seriously. Let us see. Do bees wound flowers? In A B C of Bee-Culture, page 168, Mr. Root tells us that he discovered how the bees got so covered with pollen while working on the wild touch-me-not, and on page 169 he says: "A year or two after this I took a friend of mine to the spot to show him my wonderful discovery, but lo! and behold! the sharp witted Italians had taken the short cut to the honey by biting through the spur and inserting their tongues without the laborious operation of crowding down into the flowers."

Mr. Mahin chides me for not giving proof that bees wound blossoms. Here is proof that bees are able, and that they did in this case, bite holes through the flower and got at the honey mechanically from the outside. In my article I stated that "if bees would have honey they must find where the plant had by accident or otherwise been wounded, or it must hunt out some tender point and inflict the wound as best it could." I do not hold that bees must, like men, chop holes in the trunks of maple trees to get the sap, but I do know that after men have thus set the sap leaking, the bees gather it. But in regard to bees hunting out some tender points to inflict the wound itself. The tenderest portion of the blossom is as much a portion of the plant as is the trunk.

Now, in regard to the corn honey, Mr. Mahin says that "corn honey is a myth." When I quoted Mr. Morris, in regard to corn honey, I did not give his statement verbatim, as it was lengthy. I will now give the statement of Mr. Morris from *Gleanings*, of December, 1882: "Sometime in August * * * when white clover was about played out, the bees took a spurt, and for several days we failed to find what they were working on; heartsease and goldenrod were not in bloom. My wife called my attention to it first. She had followed the line of bees, and found the corn field swarming with bees. At first you would suppose a swarm was going over, and wonder where they were. Stand still a moment, however, and you will see a bee come from under the base of a corn leaf, then one from between the stem of an ear and the stalk, then some from way down by the roots, and by that time you will begin to see where they are getting the honey, not from the silk, not from the blossom, but from the stalk, at the base of every leaf at each joint, and on every stalk, and on every hill. We obtained 500 pounds of extracted, same of box, of this same corn honey, and you will see by the sample it is nice. Bees worked on the corn about two weeks. Field corn begins to yield honey about as the kernel begins to form, and continues until the kernel is well formed. At least it did here this year.....I think it always yields honey, some every year, but you cannot always tell what is going to yield honey. H. M. MORRIS."

At the close of the above letter from Mr. Morris, Mr. A. I. Root remarks: "Many thanks friend M. for your valuable contribution to our stock of facts, and also for the sample of honey. The corn honey will rank with the best we have, both in color and flavor.....I would strongly indorse the point you make, friend M., about the honey coming from unexpected sources. We little know now where the honey we may get next season will come from, while the honey comes from so many hitherto unknown sources, and there is such a broad field of knowledge yet unexplored."

Mr. Morris says in the BEE JOURNAL, page 145: "Mr. Stewart quotes me from *Gleanings* a little wrong. I said: I think bees gather some honey each year from corn. His statement is that my bees gather large quantities of corn honey each year. I know that they did this year. Corn honey has such a peculiar quality that if one ever gets a yield, he will be apt to know it if he ever gets another, and I am quite sure I have had corn honey before."

Mr. Mahin says that "if Mr. Morris ever saw bees sucking at the joints of corn stalks....the corn was infested with chinch bugs, or some species of plant lice." Mr. Morris and his wife would most likely have noticed chinch bugs if they had been on the corn in such numbers as to produce the effect that he reports.

Mr. Mahin says, "that he has watched bees by the half hour gathering honey from clover, etc." If he has, and has read a corresponding amount of modern literature on bee-culture, he must know that honey gathered after plant lice is of an inferior quality. Mr. Morris and Mr. Root both testify that the above mentioned corn honey was a fine article. And yet, again, Mr. Mahin says, "that if bees can work on corn, as we believe they can, they would break the skin of grapes, and we would have to acknowledge that we were liable to the grape growers for the damage to their crops, which we have claimed was done by birds and wasps, etc."

Mr. Mahin has based his hyper-criticism on a misconception. Did I not show that our choice fruits, etc., all came by cutting, pruning and uprooting of the plants, and also that white clover thrived best where it was most severely pruned? He should know that plants and fruit are subject to a law of growth, and they may be wounded to a certain extent without producing any perceptible injury.

Growth is continually laying off old conditions and building on new, changing acid to nectar, healing wounds, supplying waste, increasing dimensions, changing form, etc., and yet the health of the plant remains.

If Mr. Mahin will experiment one-half an hour in June and July, he will find that fruit may be pricked with a fine needle through the skin, (if done carefully), and the fruit remain healthy.

Orion, Wis., May 4, 1883.

☞ The Central Kansas Bee-Keepers' Association will meet at Manhattan, Kansas, on June 30, 1883.

THOS. BASSLER, *Sec.*

SELECTIONS FROM OUR LETTER BOX

White Clover Bloom.

The boom is here on white clover. The ground is literally covered with bloom. The bees are busy from morning till night. The battle opened this day week, and the hives are now full of honey, and the bees are working in the boxes. It is the finest flow I ever saw.
I. H. SHIMER.
Hillsboro, Ill., June 7, 1883.

Good Prospect for Honey in New York.

My 30 colonies wintered without loss, but I lost 2 by spring dwindling. They are now in good condition for the honey harvest, for which the prospect is good.
CHARLIE W. BRADISH.
Glendale, N. Y., June 10, 1883.

Discussion on the Best Frame.

I have had some letters concerning my article on page 263; they speak of it as a challenge to discuss the frame subject. I ask all to read the article once more. Generally discussion soon merges into contention; and then long articles are written on both sides, to show that what one asserted is ture or false, when, whether true or false, is of no consequence; for instance, of what use is it to know if they have got the Langstroth frame ¼ inch too large, to a sensible man that uses a sensible frame. J. W. Porter's style, on page 288, is what we want.
E. B. SOUTHWICK.
Mendon, Mich., June 8, 1883.

Not at all Discouraged.

I put 112 colonies of bees in the cellar last fall, and took out 108, all in good condition. The spring has been cold and windy. The bees consumed more honey this spring, than during all the winter. I never lose any bees unless I was to blame for not having them in proper condition for winter. I can manage 300 colonies alone, with some cheap help to make hives and boxes, and to assist in swarming time.
CHAS. FOLLETT.
Osage, Iowa, June 8, 1883.

Mock Orange for Honey.

Bees, in this vicinity, are swarming, very lively. I have had 9 swarms; one colony having given 3 swarms, viz.: May 26, June 1, and June 4. Another one, an Italian, has swarmed twice. My bees have stored no honey in the surplus boxes yet, but I expect to receive some soon, as the Alsike, white clover and locust are in bloom. The ants are very troublesome, making their nests in the upper story, around the surplus boxes, and running into the lower story when I open the hives, irritating the bees so that it is impossible to work with them. Basswood, which commences to bloom about July 1, is very full of bloom, this year. I enclose a flower and leaf for name. It is an ornamental shrub commencing to bloom about May 25, and lasting from 4 to 5 weeks, during which time it is entirely covered with bees. The leaves are almost hid by flowers.
F. A. BOHL.
Summum, Ill., June 4, 1883.

[It is mock orange (*Philadelphus coronaria*); an exotic shrub, very commonly cultivated.—T. J. BURRILL.]

Swarming and Storing Honey in Ark.

I started the spring with 30 colonies; and have already taken over 2,000 pounds of extracted and 60 pounds of comb honey. Had it not been for the recent cold weather and the last few days of rain, I should have done much better I have an increase of 15 good strong swarms. I would not be without the BEE JOURNAL for any price. I shall work a large number of colonies, another season.
R. J. ADAMS.
Lakeport, Ark., June 5, 1883.

Long, Cold Spring Weather.

We have had a long, cold winter; and even since the spring quarter has appeared, we have had only sometimes a day which we rejoice to see, as a summer day, but the day following, and for several days, the old cold gloom again. One day in May, it commenced to rain, then turned to snow, and snowed the whole afternoon; however, at present, and for some days past, it appears like settled summer weather, and plum trees are in full bloom. There is an abundance of dandelion bloom, apple trees also are coming in nicely, and I hope we shall have a good season yet.
EDWARD MOORE.
Barrie, Ont., June 5, 1883.

National Convention.

Providence permitting, I shall go to the National Convention at Toronto, if the time is made to suit. For my own part, and I believe the majority of Southern bee-keepers, would prefer the last of September, as the most suitable time for holding the meeting, or not later than the 10th of October. The reason I prefer September is, there are more opportunities then offered for the purchase of "excursion tickets" to the North. I hope the committee of arrangements will select the time at as early a day as possible, so as to give bee-keepers ample time to effect all necessary arrangeements to go.
J. P. H. BROWN.
Augusta, Ga., June 7, 1883.

Too Much Rain.

We have had rain, rain, rain, for the past two weeks, till everything is flooded with water. It became warm about May 25, but since then it has been so wet that the bees could do little or nothing. I am feeding my bees to keep them from starving. White clover promises well, and with good weather I hope the bees will soon get a living. My best colony gave a swarm on the 9th, owing to extra care, as I wished to get queen-cells produced by natural swarming as early as possible for queen-rearing.
G. M. DOOLITTLE.
Borodino, N. Y., June 12, 1883.

Good Outlook for Honey.

I put into winter quarters 45 good strong colonies, and 44 came out. My bees are in fine condition, and are booming, giving from one to five swarms every day. My section boxes are almost ready to take off. White clover is abundant, and the outlook is good.
WM. TAYLOR.
Sinclair, Ill., June 11, 1883.

Wonderful Honey Plant.

The winter before last I procured a small package of sweet clover (*melilot*) seed, and sowed about 6 square rods in March, 1882, for a test. It grew last year, and sent its roots well in the ground. The past spring it shot up from the roots quite early, and, although from the first week in April to the present time, a good rain has not fallen on it, it put on a wonderful growth, and much of it is 6 feet high. It began to bloom about the middle of May, and is now a perfect mass of flowers, swarming with bees. I do not know how long it will last, but it certainly is one of the finest honey plants I ever saw. I think an acre of it would supply a large apiary. It is certainly worth trying in Texas, as it seems to resist the effects of dry weather so well. The spring has not been a favorable one for bees; but little swarming; doing well now, however.
W. P. HANCOCK.
Salado, Texas, June 7, 1883.

Perpetual Bloom.

On April 1, 1883, I sold off what bees I had in Southern Nebraska, and I made up my mind to find a milder climate for myself, and also a place that my bees would not have to remain housed for from 5 to 6 months in the year. Here, near Trankeyone, we are locating an apiary of 200 colonies, some of which have, at this writing, 70 pounds of as fine honey as I have ever saw. The honey flow has every appearance of being good for 6 to 7 weeks yet. This is a land of almost perpetual bloom, as I am told by the oldest inhabitants, the climate being so mild that it scarcely ever freezes, and at the same time never becomes extremely hot; it is rarely above 70° Fahr. All kinds of fruit grow to perfection here. Apple, pear, peach, apricot, plum, cherry, grapes, oranges, lemons, prunes, figs and almonds, and small fruits, such as currants, raspberries, blackberries, etc. The wheat and barley crop promises a big yield. Trankeyone is a signal station on the coast range, in Southern California.
JOSEPH SAYLER.
Santa Barbara Co., Cal., June 1, 1883.

Bees Doing Lively Work.

We have had a very cold, wet spring here; but, in spite of the cold and wet, my bees are doing finely. I had the largest natural swarm, to-day, that I ever saw. I could hardly get them into a one-story simplicity hive. They have been storing honey from the willow. Basswood will not bloom till late; the bees of this locality are nearly all black.
CHAS. HARROLD.
Onawa, Iowa, June 3, 1883.

Sweet Clover.

I enclose a part of a plant; will you give the name, and also please let me know if it is a honey plant? Bees seem to like it very well. It comes early in the spring, and grows about 3½ or 4 feet high, when the bloom comes. A great many limbs or sprouts come from the same root. It blooms the second year from seed.

L. R. WILLIAMS.

Paris, Texas, May 28, 1883.

[It is *melilotus alba*, or sweet clover, and is an excellent honey plant.—ED.]

Bees in Louisiana.

Bees, in this locality, are doing poorly, owing to the late spring and cold rains. Most of us have finished dividing, and are now waiting for a little sunshine, so that we may commence extracting. In this parish are about 2,500 colonies of bees, which are contained in about 15 different apiaries; all of which are run exclusively for extracted honey. Of course, scattered all through the country, are a few hives of bees, kept by the farmers' wives for their own use; these I did not count. I should like to know whether it is infringing on a patent to repair a patented article when it is broken? Please tell us something about Florida, Colorado and New Mexico through the columns of your valuable paper, for we Louisianians are tired of being flooded every spring, and are thinking seriously of emigrating *en masse*.

T. M. HINES.

Point Coupee, La., June 4, 1884.

[Of course you can repair, or do anything you like with a patented article, after you have purchased it, except to make others like it. Our correspondent will find considerable in the BEE JOURNAL about the localities named, especially in relation to their adaptability for progressive bee-keeping.—ED.]

Magnificent Flow of Honey.

My bees have gone crazy on the honey question. I never saw such a flow of honey before.

JOSEPH E. SHAVER.

North River, Va., June 8, 1883.

Basswood Promises Well.

Please find enclosed a leaf that I would like to know the name of, and its importance as a honey producer. I only know of a little of it along the roadside, and it is alive with bees from morning till night; blooming at the time it does, between fruit tree bloom and basswood, it might be valuable for bees if it has no objectionable qualities to over-balance the good. My bees are strong; have been starting queen-cells, but a scarcity of honey and unfavorable weather caused them to destroy the cells. There is very little white clover here, and I expect I will have to feed some between now and basswood bloom, which promises to be good. Almost every one seems to be giving their preferences in regard to a standard frame, and all seem perfectly willing to adopt a standard, provided they adopt their preference. I think a compromise between a deep and shallow frame would be the best to unite on. I think it would be easier to unite, if the advocates of both deep and shallow frames would give a little, and I would endorse the frame recommended by Mr. P. P. N. E. Pellissier, on page 240, 10 inches deep by 15 inches long, inside measure. I am not using that size, but would be willing to adopt it.

L. G. PURVIS.

Oregon, Mo., May 28, 1883.

[The leaf is not recognized. It is hard to determine plants from the leaf alone. Send part of the stem and especially the flower.—ED.]

Excellent Prospects for Honey.

I put into winter quarters 46 colonies, and 43 came out in fair condition; but I have lost, up to date, 5 more, leaving 38 now, all but 5 are ready to go into sections. I had hard work to keep them up, but I am satisfied to have them in this condition, after such a severe spring. I expect a good honey yield; white clover has commenced to yield honey, and there is as good a stand of it as I have ever seen. Our bees did not get enough, up to date, to keep breeding; I had to feed them largely, but hope now it is all right. I will report my experiments on wintering before fall.

A. WICHERTS.

Mattison, Ill., June 8, 1883.

Mountain Maple for Honey.

Will you please name, in the BEE JOURNAL, the enclosed plant. It grows on a tree something like the maple, and the roaring of the bees upon it to-day, attracted my attention. Fruit bloom is just done, and and if this is a good honey plant, as the working of the bees seems to indicate, it may be made to fill an important gap in the honey flow. I could not find another tree like the one from which I picked these leaves and flower.

JAMES MCNEILL.

Hudson, N. Y., May 29, 1883.

[This is the mountain maple (*Acer spicatum*), a small native tree, widely dispersed through the heavily-wooded portions of the United States and Canada.—T. J. BURRILL.]

Backwardness of the Season.

The cold and backward spring has been pretty hard on the weak colonies of bees in this section, but strong colonies are booming. Geo. C. Green, of Factoryville, 1½ miles from here, had a large swarm about two weeks ago. He winters his bees in chaff hives; has some 30 colonies, and lost none. I have 8 colonies in plain Simplicity hives; 6 of them I packed with chaff cushions, and the other 2 I left to themselves, as they were weak ones, and I thought it was not worth while to bother with them. Did they live through the long cold winter? Yes sir; and came out just as well as the rest, having quite as large a portion of their number ready for business as the others had. Why "this was thus," I cannot say unless, as the old gentleman remarked at the convention the other day, "It was just their contrary way." I wish you, Mr. Editor, would stir up those who advertise queens to sell, etc., to be a little more prompt in filling orders, or say plainly that they cannot immediately do as they advertise. Sometimes those who call themselves "square men," get a bad reputation by not being prompt. I ordered some queens some two weeks ago from a breeder who wrote me that he could send them on five days notice, but not a queen is here yet, although a letter will reach him in less than two days. I ordered more, from another breeder in the South, who claims, in his circular, to be able to fill orders in April, but not a queen do I get. In his acknowledgement of my order, he said it was cold there, and he was afraid they would die in the mails. That was three weeks ago. The mercury now stands at 85° to 88° in the shade, and he is only two days and half away. Are they all alike? I think not; but, from the little dealings I have had with some of them, I fear a majority belong to the three-handed army; that is, they have a right hand, a left hand, and a little behind-hand.

"CONNOISSEUR."

La Plume, Pa., June 5, 1883.

[The weather, this spring, has been such, not only in the North, but also in the South, that queens could not be reared and fertilized, much less shipped to fill orders. Our correspondent should remember that the circulars were gotten out in the winter, and no one could then foresee the terribly backwardness of the spring. Beeders calculated on the *usual* weather, but have been treated to some very *unusual*, this spring. All must exercise patience, eat a little more honey, and keep sweet-tempered.—ED.]

Toads—A Dangerous Bee Trap.

A few evenings since I went out to my apiary, and in front of the entrance to one hive I discovered a large toad. I watched him a few moments, and saw him catch bees as they ventured out on the alighting board. The toad would twist his mouth and turn from one side to another after swallowing a bee. I caught the toad and made an investigation. First cutting off his head, I examined the inside of the mouth, where was found several stingers in the jaw and roots of the tongue, where the bees had stung him when he closed his mouth upon them. I then opened the body and pressed upon the stomach, when nine nice Italian bees came out, lifeless. Others remained in the stomach, enough, I think, to have made the number 18 or 20. In answer to the question, "Will toads catch bees?" I can certainly answer, *they will*.

W. A. SHEWMAN.

Randolph, N. Y., June 9, 1883.

Bringing in the Golden Nectar.

I think I can say that I am "out of the woods" for this season, and will report, SUCCESS. I put into winter quarters 68 colonies, and never had them do better, until I gave them a flight late in February. I put them on their summer stands, in the first days of April, when I had lost 2 colonies. There was ten times as many dead bees on the cellar floor, on the first day of April, as there was on the first of March. I should like to have a reason for this, as they were kept as nearly as possible in the same condition through March as though the three preceding months. I have lost 3 colonies by dwindling, since the first of April, leaving 63 colonies in good condition; some of them very strong, hanging out, and giving strong indications of swarming. Mr. Layer, of Gilman, reports a fine swarm on the 23d of May. White clover is beginning to bloom, and for the last two days, they are working lively, bringing in the golden nectar, and their busy hum, to me, is sweet music. The more I am with the pets, the better I understand their language, for a language they have, most certainly, and it is well to understand and heed their words, or they may use something sharper.

REUBEN HAVENS.
Onarga, Ill., June 4, 1883.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

☞ Will my friends please send their questions to the Editor of the JOURNAL, and not to me; they will be answered just as promptly. I now have a short-hand reporter who can take down my answers as fast as I can think them, which enables me to "talk back" with great satifaction, so send along your questions, but to Mr. Newman and not to me, please.

Queen Rearing.

Will Mr. Heddon give us his opinion of Mr. Alley's book, "New Method of Queen Rearing?" I have seen the same method of obtaining queen-cells practiced three years ago, in a large apiary, in a neighboring county.

C. W. GREEN.
New Orleans, La., June 7, 1883.

ANSWER.—I regret very much that I am unable to give my opinion upon Mr. Alley's "New Method of Queen-Rearing." Mr. Alley kindly sent me a copy, asking for my opinion, but I have been too busy to read it. I must fill my engagements and answer business letters, and this takes all of my time, and overtaxes me at that. I did read Mr. House's chapter on "Comb honey production," and also Mr. Locke's on the "Races of bees," therein contained. I disagree entirely with the tenets of both these chapters.

Drum Box and After-Swarms.

I would like to have Mr. Heddon answer these questions:

1. How does he prevent after-swarming?

2. Explain his drum box; is it in any wise different from a common box made to fit the top of the box hive he is transferring?

3. I have had 8 swarms from 3 colonies already. Bees have been storing surplus since April 1.

GEO. E. LYTLE.
Flat Bayou, Ark., May 28, 1883.

ANSWERS.—1. We very rarely have any attempt at after-swarming. If such are cast, we hive the after-swarm in a hive of comb foundation, and put it by the side of the old box. When the 21 days have passed, we then drive the bees in the old box into the hive with the after-swarm, and, at the same time, all three can be put together if you were driving on the non-increasing plan.

2. My drum box is simply a box of *about* the size of the hive to be drummed, but I think it would be an improvement, one I thought of 7 or 8 years ago, but have never made, to have a drum box contain numerous thin light division-boards, to enable the bees to readily ascend from all parts of the old hive.

Antiquated Management.

Will Mr. Heddon kindly answer the following questions through the AMERICAN BEE JOURNAL, for a friend:

1. If a man is doing all his own work, can he manage more bees for comb honey production, or for extracted honey?

2. Which way can he produce the greatest number of pounds, by using sections or extracting?

3. Can comb honey be shipped safely to market in the Langstroth frame, and would it find ready sale?

4. Would there be any market for comb honey in 10 or 20 pound boxes, such as were used 20 or 25 years ago?

5. I write this for the benefit of a friend. The questions being fully settled in my mind, and he being willing to abide by your answer.

G. C. VAUGHT.
Greenville, Miss.

ANSWERS.—1. We must understand that less colonies are required to gather the honey of a given area, when they are working for extracted honey than when working for comb honey. With proper fixtures in both cases, there is not much difference, if any, in the amount of labor required.

2. If he is getting extracted honey for sauce, and takes out a ripe article, he will get but little more extracted then comb honey, provided he thoroughly understands the law governing the production of comb honey.

3. To this question I answer No. The smaller the frame or sections honey is put up in, the safer it will be during transit. The full-sized Langstroth frame would be unsafe, besides there are hundreds of other objections against using it. It would not find ready sale in packages of that size.

4. Occasionally some odd genius might demand it in that shape, but as a rule there would be no market for it. The honey would have to sell at several cents per pound lower.

5. I hardly thought any reader of the AMERICAN BEE JOURNAL would be apt to ask such questions. The small sections are not only more salable at the present time, but the most transportable packages, and the most economical, labor and prices both considered.

Fertile Workers, etc.

The season is from two to three weeks late here, but we escaped the snow storm of May 21, that was so destructive through Ohio and further South. We also have had but little frost, and fruit propects are good for apples and cherries, and all kinds of small fruit; clover has wintered well, and has an enormous growth for this date; wheat promises to be above the average through this section.

1. How soon, after a colony becomes queenless, will fertile workers make their appearance?

2. Cannot queens be induced to lay to their utmost capacity in a single season, and thus become worthless after, by removing and replacing combs; the queen being in a strong colony?

3. What objection would there be to crossing the Holy Land bees with the pure Italians? Are they as irritable as other hybrid bees?

S. J. YOUNGMAN.
Cato, Mich., June 7, 1883.

ANSWERS.—1. There is no definite time. I have known them to appear in a few days after becoming queenless; at other times, several weeks after.

2. I have found that queens can be stimulated to lay such an amount of eggs in one or two seasons that they seem to have exhausted their fertility.

3. The main objection to crossing the Holy Land bees with Italians, is that they have not the valuable qualities possessed by the Italians, which every comb honey producer so

much needs, but the brown Germans have, and this is why the very best honey-gatherers can be procured by judicious crossings of leather-colored Italian and brown German bees. There is no need of losing any amiability in such crossing as the one last referred to. It is the simplest and easiest thing in the world to increase it.

The Holy Land bees have two traits of character, which must forever keep them from the apiaries of wise honey-producers. First, they are terribly irascible; secondly, they do not ripen their honey properly before sealing it, which causes it to press against the capping and ooze out. I have never had them in my apiary, I am happy to affirm; but good reliable parties, who have tested them thoroughly, furnish me proof of the above statements.

The brown German bee excells any bee in the world, in the much desirable point of building white comb, and doing it readily and rapidly; also in ascending to the upper story early in the season, and in not crowding the brood-chamber with honey. These valuable traits no wise honey producer will ignore. Another valuable point about them is, they are not nearly as much inclined to swarm as the yellow races of bees.

Transferring.

I have been transferring bees from American hives into others, but have not yet finished. Would you advise me to finish now? Please answer through the Bee Journal and oblige. SILAS REMINGTON.
Lowell, Mich.

ANSWER.—We practice transferring either on the old system or the new, all through the season, when convenient, and see no reason why you should not finish the job at once.

Separators with Broad Frames.

Several correspondents have asked me if I considered it advisable to use separators with broad frames. I will reply that I do. When I run 34 broad frame supers, I tried omitting the separators. I find that while the "case" seems not to need separators to get reasonably straight combs, the broad frames are almost a total failure without them.

Bees are just beginning to swarm and store in cases here. The prospects are *good*. "After clouds, sunshine." We are now transferring several colonies on the new plan, which the students think "the boss."

Special Notices.

Examine the Date, following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

Our Premiums for Clubs.

Any one sending us a club of **two** subscribers for 1 year, for the Weekly, with **$4**, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For **three** subscribers, with **$6**, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For **four** subscribers, with **$8**, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

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THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

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THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

Mourning Turned to Joy.

Only a few weeks ago the bee-keepers indulged in a mournful song, now that song has turned to joy, as may be seen by looking over the letters in this issue of the BEE JOURNAL. The present indications are that the honey harvest of this year will be exceedingly bountiful. Now is the time to give every moment to the bees, and see that everything is in order, and that all manipulations are attended to promptly. It will pay well to do so. The *Indiana Farmer* remarks as follows:

> The heart of the bee-keeper is glad in the land. Colonies that have cast a swarm will require looking after at frequent intervals to see that the young queen is not lost on her bridal trip. Do not neglect them, then, after she gets lost. With no eggs from which to rear a queen, the colony dwindles away. All sections should be removed from the hives just as soon as they are capped over, thus preserving the pearly whiteness of the capping. If left standing on the hives, the bees soon soil the combs by traveling over them. Honey thus early removed is not thoroughly ripened, and should be placed in a warm place. It is not necessary to wait until every cell is capped over, for the bees will continue to find a place for a cell or two long after the section is sufficiently full to be removed.

☞ By the Canadian *Farmer* we learn that the National Bee-Keepers' Convention has been appointed to be held at Toronto, Canada, during the third week of September—probably on Wednesday, Thursday and Friday, Sept. 18 to 20; but so far we have had no official notice of it, and, therefore, presume that it is *not* yet fully determined upon.

King-Birds as Bee Enemies.

Mr. Wm. M. Slater, writes thus: "MR. EDITOR.—The following article I noticed in the Pittsbugh *Stockman*, please investigate and report in the BEE JOURNAL:"

> It is a remarkable fact that all the experts on bee-culture have overlooked the prime laws of all the trouble, and that is by simply letting the king-bird have his way while he makes a perfect fraud of all the Yankee bee appliances, and even the Ohio bee journal itself. On Monday, May 1, my colony was attacked by seven king-birds, and I went to shooting them, but did not succeed in getting all in until Wednesday evening, and in that short time they had got very nearly one-half of my bees, and in desecting them I found nothing else but bees. Their formation is the same as a duck; they have no craw, and everything they swallow passes direct to the gizzard, consequently requiring double the amount of food of common birds. You can see him all day, purched on fence stakes, stumps or mullon stalks, waiting for the industrious bee, and if it gets within any reasonable distance of him, it is gone. I have seen him dart up in the air nearly 100 feet and catch a heavy laden bee going home. I have seen him dart from his perch and catch four bees and return to his perch, when he would most ingeniously put his bill down to the perch and then take his long middle toe and hold them fast while he would pick off the head and shoulders and throw them away, and swallow the bottle ends, and in ten seconds of time he is ready for another haul.
>
> I am paying the boys 10 cents apiece for all they fetch me, dead or alive. Every bee-keeper knows that bees are divided into two squads, and for convenience we will name one the field hands, and the other the colony hands. Now let the king-birds pick off the field hands, and then the colony hands have got nothing to do, and they go to playing; then we call them idle, lazy bees, and are doing no good, and never for one moment think of the king bird being the prime cause of all the trouble. J. R. A.

The *Stockman* has been imposed upon. The king-bird has been repeatedly denounced by the BEE JOURNAL as a murderous thief, and a "shot-gun" is very generally used to wake up the ideas of that "bird," when he visits apiaries, on his destructive mission. Mr. A. is simply trying to play "smart," in papers that know nothing of bee-culture, and are therefore unable to detect his false accusations against the bee papers.

Wonderful Instinct in Bees.

Many interesting accounts have been written of the wonderful instincts of honey bees, some, in fact, which would almost tend to prove that they possessed reasoning faculties. An Australian bee-keeper contributes to the *Queenslander* the following interesting incident, illustrative of their sagacity:

> A neighbor of mine who keeps bees in bar-frame hives, had robbed them of some of their surplus stores, but noticing a few days afterwards the honey running from the entrance to the hive, and the bees clogged with it, he raised the top to ascertain the cause, when he found the bees in so woful a plight that he knew not what to do, and was quite disheartened. He mentioned the matter to me, and I went to his assistance. I found the hive in a dreadful state; the frames were very large, and the weight of honey proportionally great; the combs had fallen down, and the honey been set free. Thousands of bees were suffocated and smeared with the honey, and it was a work of some difficulty to set matters right. On the floor of the hive, and floating in the escaped honey, were dozens of white grubs, which had evidently been forcibly drawn from the cells by the bees, and the reason they sacrificed their progeny appears to be that, finding themselves overwhelmed with the disaster that had fallen upon them, and having filled every available crevice with the over-flowed honey, they had found it necessary to empty the cells of the young brood in order to find space to store the balance until the wreck could be repaired. There was reason, certainly, for what they did, and the fact has not, perhaps, been noticed before, because the people who kept bees for observatory purposes, would never have allowed such a calamity to happen to them.

What is the Langstroth Hive?

Our attention has been called particularly to the above question by the following argument by Mr. G. M. Doolittle, Borodino, N. Y., against the adoption of a "standard size of frame" for America. At first he starts off as an eloquent advocate of the Langstroth frame, taking broad grounds, including "nearly all the frames in use in the United States" in the term "Langstroth frames." Then, gradually, forgetting his eloquent beginning, he narrows his views down to the idea that *only* those whose dimensions are 17⅜ or 17⅝x9⅛ should, in fact, be called "Langstroth frames." But we will not forestall his arguments. Here they are:

There seems to be much written, of late, regarding the Langstroth frame, and I see there is a tendency on the part of those writing on this subject, to classify all frames that are not 17⅝x9⅛ as other than the Langstroth frame. Now I claim that nearly all (if not quite) of the frames in use in the United States, to-day, are Langstroth frames, to all intents and purposes, and I would here say that whether I use a frame 10 inches square, or one 9x13, all honor is due Mr. Langstroth for giving us a *practical* frame that each can adopt to suit their climate or fancy.

Because I adopt the form used by E. Gallup, it does not make it any the less a Langstroth frame. Mr. Gallup told us, years ago, in the good old AMERICAN BEE JOURNAL, that he considered the frame he used *the* Langstroth frame, but that he had varied the dimensions of it so as to suit Elisha Gallup and the cold climate of Wisconsin and Iowa.

That Mr. Langstroth himself considered all frames in use embodying his principle, as the Langstroth frame, is proven where he says, "Mr. Quinby prefers to make my frames longer and deeper." Hence it is no more than right that we give Mr. Langstroth the credit of the frame, no matter how far from the original we may have varied the dimensions.

Then again, I notice that some are disposed to try to compel all to use the standard Langstroth frame. This, I think, can never be done, and I see no necessity for it, unless it is to favor the supply dealers. If the supply dealer cannot live at the supply business as it is, perhaps it would be well for him to try apiculture in a more practical way, by getting his "bread and butter" from the honey he is able to produce.

Why I do not believe that the 17⅝x9⅛ inch frame can ever become a standard, is because we will not all give up our views and notions regarding our frames, to adopt the views cherished by others. We see by the last few numbers of the BEE JOURNAL that there is no prospect of Mr. Heddon and Mr. Alves even reconciling the difference of ¼ of an inch, and if two, who are so near a standard, will not make an alteration of ¼ inch for the sake of a standard frame, how can it be expected that those using a frame as shallow as the Bingham, or as large as the Quinby, can ever be brought to unite on one frame?

When I first began bee-keeping, I started with the Langstroth frame as given in his book, but after three years, I adopted the Gallup, and am better pleased with it to-day than I was when I first adopted it, for the reason that, after handling various frames, I am confident that I can make more money from my bees, taking all things into consideration, than I could by the use of any other style of the Langstroth frame. However, I once said, and so say now, that had I 30 colonies of bees in hives containing any of the frames now before the public, which are practical, I would not go through the operation of changing all fixtures, for the difference it would make as regards producing honey for market.

Most of the frames now in use are practically good enough for the production of honey, and were all men half as enthusiastic over qualifying themselves to be first-class, practical managers of an apiary, as some are over a standard frame, our production of honey in the United States would be doubled; no matter what frame was used.

As I said before, I prefer the Gallup size of the Langstroth frame, but I wish it understood that I believe the manager has more to do with the securing of a good crop of honey than has the style of frame.

Again, I notice that nearly all who advocate a standard frame, are men claiming to use a frame 17⅜ or 17⅝x9⅛. Now, if these are valid reasons why I should adopt a frame 17⅝x9⅛, I have failed to see them, and it rather looks as if these men who are clamerous for that frame, are not satisfied with it, or else have some selfish point in view.

Once more, Mr. Porter tells us, on page 288, that one reason why we should adopt the Langstroth frame is, that the *returns* are greater than from other styles; and winds up by saying that "Doolittle comes the nearest to it, but I forget the dimensions of his frame. But he has been greatly surpassed." Who by? Lots using the Langstroth frame. Admitted; but who surpassed the lots? L. C. Root with the Quinby frame. Does this help Mr. Porter any? Then, Mr. Pond says (not in the BEE JOURNAL), in trying to sustain the merits of the 17⅝z9⅛ frame, that Doolittle winters bees poorly, while a certain man using the Quinby frame winters every time. Again, I ask does this help the Langstroth frame any? Where does A. I. Root and J. Heddon stand regarding successful wintering as a plea for your lauded style of frame. Another thing, let me just whisper, if I am correctly informed, that persons said to have wintered bees with his Quinby frame every time, has brought more bees in the spring (since I kept bees) to replace his loss than Doolittle ever owned.

Just one more point and I have done. A. I. Root often tells us, in *Gleanings*, that there are more Langstroth hives and frames in use than of all others put together (I saw a report of a convention not long ago, where but two used that frame out of 13 of our largest bee-keepers, which did not look as if Mr. Root's assertion would stand the proof), but for the sake of argument I will admit that there are. Now, I ask Mr. Root, in all candor, how came such a state of affairs to be brought about? Was it not because he had machinery all rigged to turn out the Langstroth hive, and then told all, through *Gleanings*, that all ordering the Langstroth hive and fixtures for it, would get "the regular goods" at once, while if they wished odd sizes their orders must be delayed till the others were filled. And did he not tell all the beginners that they should fall into (that) line? Now, if Prof. Cook had edited *Gleanings*, and been as strenuous for the Gallup frame as Mr. Root has been for the Langstroth frame, and L. C. Root had been editor of the BEE JOURNAL, and was pleading for the Quinby frame, would the Langstroth frame been in the ascendency? I trow not!

I am willing that any one in the world should use a frame 17⅝x9⅛, if they so desire, but I *do* like to see the advocates of such a frame come out *square* and *honest* before the world, and let the people know the whole truth regarding what caused the state of affairs, which now exist.

Borodino, N. Y., June 11, 1883.

Mr. Doolittle is quite unfortunate in the latter part of his argument. At first, he claimed that "nearly all (if not quite) of the frames in use in the United States, to-day, are Langstroth frames, to all intents and purposes"—the principle and not the size, being the distinctive feature of this deservedly-popular frame.

Then towards the close he chides Mr. A. I. Root for claiming "that there are more Langstroth hives and frames in use than of all others put together," notwithstanding that Mr. Doolittle had made a more sweeping assertion even than that, in the first paragraph of his argument.

This shows that Mr. Doolittle is *not quite clear* about what the distinctive feature of the Langstroth frame is! or, perhaps, he became so *bewildered* by the magnitude of his own argument, that he lost his balance, and *tumbled* to the other side of the question.

His assertion is doubtless true as given in the first paragraph—but, this admitted, proves also that Mr. A. I. Root is correct in his assertion, which Mr. Doolittle chides him for making! There is no escaping this conclusion!

Prof. A. J. Cook also takes the same view of the matter. In his

Manual he eulogizes the Langstroth hive and frame, and then adds: "Though I prefer and use the *size* of frame first used, I believe, by Mr. Gallup, *still I use the Langstroth hive.*"

Mr. M. Quinby also entertained the same ideas. In Quinby's New Bee-Keeping, page 97, Mr. L. C. Root, its author, says: "In the previous revision of this work, in 1865, Mr. Quinby fully recognized the merits of Mr. Langstroth's invention, and described *the modified form of his hive.*" This modified form was called the "Quinby;" Prof. Cook's "varied size" of it, is called the "Gallup;" Mr. King's variation was named the "American," and other modifications bear names by which to designate the varied size of the Langstroth frame and hive. Hence, Mr. Doolittle was particularly correct in his first paragraph, in stating that "nearly all the frames in use in the United States to-day are Langstroth frames."

As to the desirability of having the sizes in use as *few* as possible, there can be no two opinions. With the sizes used by Quinby, A. I. Root, King, Gallup, etc., there certainly are enough for all climates, and the practice of varying the sizes of any of these, just a little, to suit a notion, is very reprehensible. The variations made by Mr. A. I. Root, from 17⅜ to 17⅝ we regard as an exception, because it was done to accommodate the use of the one-pound sections in cases in the brood-chamber, interchangeably with brood frames. If all cannot unite on one size, all *can* unite in agreeing to use *one* of the standard sizes before enumerated.

Another point made by Mr. Doolittle is quite correct—more depends on the management than on the size of the frame used. This we have so often argued and asserted, that it is not now necessary to do more than to endorse most unreservedly Mr. Doolittle's statement.

We grant that, for convenience, the size 17⅝x9⅙ is usually called the Langstroth to distinguish its *size*—but when we indulge in an article on the movable frame principle, they are all to be included in the same class.

Hence, it is clear that even if (as Mr. Doolittle agrees) Prof. Cook had been editor of *Gleanings*, and Mr. L. C. Root had occupied the editorial chair of the BEE JOURNAL, even then, the deduction made by Mr. Doolittle is *totally unwarranted*, viz.: that the Langstroth frame would *not* have been in the ascendency! Prof. Cook and Mr. L. C. Root both claim to use the Langstroth frame in a modified form, and hence they would have advocated its use—and it would "have been in the ascendency," even though the size may have been a little varied, one way or the other!

The Order of the Honey Bee.

In an interesting notice on French orders of Chivalry, past and present, a writer in the *Journal des Debats* mentions, among many other extinct Orders, the "Order of the Honey Bee," and gives the following very interesting scrap of its curious history:

The last named has a curious history. The medal of the order had on one side a hive with the motto, "Picolasi, ma fa pur gravi le ferite," (Small, no doubt; but it inflicts a sharp wound), while upon the reverse were the head of the Duchess du Maine and the following inscription in capital letters, "Anne Marie Louise, Barrone de Sceaux, derecterice perpetuille de l. Ordre de la Mouche-e-Miel;" underneath, "Seceaux, 11 Juin, 1701."

This was the date of the foundation of the order by the Duchess du Maine, a grand daughter of the famous Prince du Conde, whose husband purchased the Chateux de Seceaux in 1700. The duchess, who was very fond of amusements and ceremonial, made Seceaux the rendezvous of the most brilliant wits of the day, and in 1703, she instituted the order of chivalry, to which the youth of both sexes were eligible.

The members of the order were expected to appear at the entertainments given at Seceaux, the men wearing a tight fitting costume of cloth of gold sprinkled with silver bees, and a head-dress made to imitate a hive, while the costumes of the ladies consisted of a dress of green satin embroidered with silver bees, a mantel of cloth of gold, and a diadem formed of emerald bees. The oath of fidelity which had to be taken by each new member was as follows: "I swear, by the bees of Mount Hymetus, fidelity and obedience to the perpetual mistress of the order, to wear all my life long the medal of the bee, and to comply to the statutes of the said order. If I am found false to my oath, may the honey turn to venom, the wax to tallow, the flowers to nettles and may hornets and wasps sting my face."

After her husband's death, the duchess did not name any fresh members; but when conversing with Fontenelle, who, together with Voltaire, Marivaux, and other wits of the time, used to visit her at Seceaux, she expressed her regret that he had not been among her earlier friends, as she would have liked to have conferred her order upon him.

Fontenelle remarked that he would have been ill at ease with a hive on his head, as it must have been very much in the way of the chevalier and of the flower about which he was flirting. To which the duchess rejoined, "Not so much as you may imagine; for surely the flowers bend down to the kiss of the bees."

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL, }
Moaday, 10 a. m., June 25, 1882. }

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The nominal price of extracted is 7c. for dark and 9c. for light—here. The supply is abundant and sales are slow.

BEESWAX—None in the market.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY.—The market for extracted honey is lively, and the demand exceeds the arrivals. Our stock is small and we are in danger of having sold out every day. We pay 7@10c. for good honey on arrival, the latter price for choice clover. There is a small demand for comb honey, and prices nominal.

BEESWAX.—Arrivals of beeswax are plentiful. We pay 35c. for a good article on arrival.

CHAS. F. MUTH.

Quotations of Commission Merchants.

NEW YORK.

HONEY.—Best clover in 1-lb. sections (no glass) 22@23c.; in 2-lb. sections (glassed) 18@20c. Fair quality, 1 and 2-lb. sections, 17@18c Extracted, white, in small barrels, 10@11½c.; buckwheat, 8@9c.

BEESWAX.—Is more plentiful. Prime yellow sells at 37½@38½c.

H. K. & F. B. THURBER & CO.

CHICAGO.

HONEY.—Prices declining. Holders are anxious to sell, and the prices vary very much.

BEESWAX—35@36c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY.—Nearly 300 cases new, mostly extracted, arrived per Southern steamer on Monday. June 15. Sales of part of the same in a wholesale way were made at 6c. Retail transfers were made at a little higher figure. Quotations for comb are nominal. There is a little choice new comb offering, but no sales reported. One buyer offered 12½c. for six cases, but insisted on being allowed about 3 lbs. extra tare. White comb, new crop, 12½@15c. Extracted, choice new, 6@7½c.

BEESWAX—Wholesale, 27@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Strained salable at 6½@7½c; comb sold in a jobbing way only—old 10@14c, and new 15c.

BEESWAX.—Sold mainly at 33 cents—latter for prime.

W. T. ANDERSON & CO., 117 N. Main Street.

CLEVELAND.

HONEY.—There is a moderate sale for best white 1-lb. sections at 18c, occasionally 19c, but 2 lbs. are not called for. Extracted is no sale at all.

BEESWAX—Not offering.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—Our supply is gone; we have none to quote.

CROCKER & BLAKE, 57 Chatham Street.

☞ The bee-keepers of Fulton and adjoining counties, are requested to meet at the Commercial House, in Astoria, Fulton, Co., Ill., on Saturday, June 30, at 2 p. m., for the purpose of organizing the Fulton County Bee-Keepers Association. By order,

COMMITTEE.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

CORRESPONDENCE

For the American Bee Journal.

Separators or no Separators.

L. C. WHITING.

Can we dispense with them? This question must be answered by each bee-keeper for himself. If he has only a few colonies, and expects to sell his honey to his neighbors, he may get more honey with less labor without separators; but when he has to go into the market and compete with others, the straight combs and well cleaned sections, well crated, will sell first at a remunerative price.

I experimented with a few colonies last season, and out of 700 pounds stored without separators, at least 100 pounds was so bulged that it could not be crated, and much of the balance had to be worked in with that stored with separators.

To get rid of this 100 pounds cost me more time than five times the amount of straight combs.

Some of our merchants bought a lot of honey in the cap, just as the bees stored it without separators. They did not know how to get it out; they pulled the tops of some off in doing so. Many sections were attached more or less to others, and honey was on every thing. The bees soon found it out, and made it lively for a time. The result was that they did not care for honey, especially in that shape.

One of our best bee-keepers, a few days since, said if had only honey put up in that shape to compete with, he should be sure of *his* success.

The way that suits me the best is, to put on a part of the sections at first without any separators. After the bees have these well started, divide them, putting a part in each row of sections, and put in the separators. This induces the bees to work in each row of sections. I also change partly filled sections, bees and all, to other colonies, if they are slow in entering the sections. If the flow of honey continues, they are almost sure to work in the sections and leave the room below for brood. One of my neighbors, who has great success in getting a large yield of honey in sections, does not use the extractors, but changes the brood combs, putting those filled with honey in the centre of the hive, and the uncapped brood to the outside, and changing it back to the centre when it is ready to hatch, always keeping open brood in the outside combs.

He certainly has strong colonies, and secures a large yield of honey. Success in all these manipulations depends largely on the good judgment of the bee-keeper. "The right thing at the right time," is what is wanted. The queen, during the flow of honey, should have no more brood combs than she can keep full of brood and eggs.

East Saginaw, Mich., May 26, 1883.

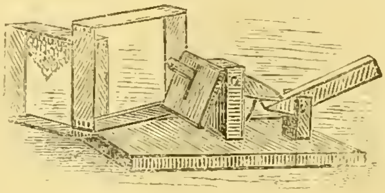
For the American Bee Journal.

Fastening Comb Foundation.

J. S. DUNCAN.

After trying many of the various methods of fastening comb foundation in sections, that has been described in the BEE JOURNAL, they being slow and tedious, and not suiting me, I have constructed a fastener that has worked with perfect satisfaction, and will try and describe it so that others can make one.

It is constructed as follows: A board about 7x12, with holes mortised near the centre, 3 inches apart; two standards are tenoned to fit these mortises, and wedged tightly. The front or presser standard is 3 inches high; the lever standard 2 inches high. These standards are dovetailed on top, and have holes bored for joints of levers; two levers are fitted to these dovetails and fastened with bolts; one lever 9 inches long, and a hole 2 inches from one end; one lever 5 inches long, and a hole in the centre, and a tenon on one end to take the presser, the long lever fitted to the short standard and applied under the end of the short lever; a rubber band or spring, from the board to the short lever, brings it back to place, when the pressure is removed. The presser is 3x4 inches (or any size to suit the section used), with a hole mortised near one side, and fastened on tenon, with a pin, and so fitted that when a two-inch section is under the presser and guaged against the standard, the presser will strike about ⅞ on the section, or so that the foundation will hang in the centre of the section when inverted. The bottom of the presser being rounded so as not to cut the foundation, and made of soft wood to hold moisture. In using grooved sections, place the foundation just over the groove; press slightly, to make it stick; slide under the presser, till the section strikes the standard; press on the lever and the job is done. I prefer sections not grooved; in using them, make a foundation gauge with two pieces of sections; one projecting over the other, and tacked to a board; slide the section under the projection, and lay on the foundation to the guage.



Comb Foundation Fastener.

This press is very convenient, as it requires no clamps or screws to fasten it to the table, as the pressure is applied at both ends at the same time. With this machine you can fasten foundation just as fast as you can handle the sections. The foundation sticks best when it is firm enough to handle good, and is not soft; keep the presser well wet with soap water or honey, and you can fasten 50 starters without any sticking. A piece of tin, with the edges folded up, and several folds of cloth in it, makes a good pad for wetting the presser.

Browning, Mo., June 12, 1883.

Read at the Maine Bee-Keepers' Association.

Spring Management of Bees.

H. B. CHAPMAN.

In presenting this paper, I shall endeavor to give only an outline of the subject, for, if I should go into all the points and particulars, it would take too much time; besides I do not feel capable.

In a well managed apiary, spring management will include 3 months—April May and June. If bees are properly cared for in the fall, they will need but little attention before April. Examine all your bees the first warm day in April, to see if they have sufficient stores. I would not advise having much honey in the center at this time of the year, as the queen will be crowded for room. The two middle combs should be empty, or nearly so, and if the bees go into winter quarters as strong as they should, such will be the case. If any colonies are found short in stores, give them a comb of honey saved the fall before, or sugar. Take away all unnecessary combs, confining the bees on as few as they can cover. Make the entrance small; many leave it open the whole width; this is wrong. What would you think of a man who insisted on having a door half the width of his house and twice as high as his head, and open all the time? Bees must be kept warm during the chilly weather of spring. Examine your locality to see when the flowers blossom that produce an abundance of honey, then have every colony in the best working condition possible; to accomplish this, feeding should be resorted to.

Outdoor feeding is preferable if you are not troubled with other people's bees, but if you are, then feed in the hive. Maple syrup has proved excellent for out-door feeding, as it does not stimulate robbing. To start them to work on it, put a little honey on the feeder, and it will make you laugh to see the little fellows carry it off. Keep the feeders full; the bees will not carry off more than they want. If you wish to feed in the hive, place two strips three-eighths thick upon the feeder; in this cover, insert a tube made of wood—place the feeder across the ends of the frames, then lay on your quilt and chaff, and it is ready for use. I do not like sugar candy for feed, as the bees will tear down and carry out a large part of it.

When the combs become well filled with brood, they should be spread and an empty comb inserted, taking care not to spread too fast. Every colony should have a good laying queen. Quinby said, "The introduction of a mature fertile queen to a colony two weeks sooner than when they swarm naturally, is an advantage sufficient to pay for the extra trouble.

The time gained in breeding, is equivalent to a swarm." If such is the case, it will pay well to buy queens. When the brood chamber is well filled with brood, and the young bees begin to hatch rapidly, put on one tier of boxes.

I think a few pounds of sugar syrup fed at night after the boxes are placed on, will give much aid in starting them in. The swarming season demands the close and prolonged attention of the bee-keeper, hives, boxes, frames, and feed should all be ready. The new hives containing comb or comb foundation, should be placed upon the stands where they are to remain through the summer, if natural swarming is followed. Do not give your new swarms too many frames of foundation or combs; the best results will be obtained with five or six frames. If honey is coming in well, put on one tier of boxes within 12 hours after swarming; when these are three-quarters full, raise them up, putting under another set.

If you have a colony rounding off the corners of the combs before the boxes are plump full, they think they have done enough, and the best way to keep them at work is to make an artificial swarm from them. It requires a very clear mind to keep the bees profitably at work all of the time.

For the American Bee Journal.

Management of Bees in the Spring.

ALLEN PRINGLE.

The past winter and spring has been the hardest season on bees, in this latitude, I have ever witnessed. Upon making diligent inquiry within an area of many miles in the eastern counties of Ontario, I find that of the bees wintered outside without protection, almost all are dead; of those protected outside, two-thirds are dead; and of those wintered in bee-houses and cellars, on an average, one-half.

To those who wintered their bees properly indoors, the spring has been much worse, and more fatal than the winter. It has been exceedingly unfavorable up to about the first of June. Indeed, some of mine are still protected with extra warm stuffed quilts. The fruit bloom was only at its height two or three days ago (8th); is fully two weeks behind other years, and almost everything else proportionally backward. The corn was only planted, in this locality, the past week, and the potatoes are yet to plant.

My own bees were taken out of winter quarters about the first of April, in very good condition; all alive. I have since lost two colonies by dysentery or "spring dwindling," and two, whose queens were accidentally lost just after being put out. But I certainly would have lost two-thirds of my stock of bees had I not stirred my wits to circumvent the most unpropitious weather, and fight against most adverse circumstances. When old bees are set out in the spring, and begin to exercise on the wing, their pilgrimage in this world is exceedingly short; and unless you can, in spite of the frowning and unfriendly elements, promptly induce the breeding of young bees to take the place of the old ones, your hives soon become still—not the stillness of snug winter quarters, but the stillness of death.

Now, according to my experience, the best way to accomplish this purpose—to induce sufficient breeding to preserve the colony—is this: Keep them warm from the time you set them out; and after their cleansing flight, the very first day warm enough to open the hives, examine them, thoroughly clean out the dead bees, etc., and diminish their room according to their strength, crowding very weak ones up on two or even one frame, and others into three, four or more frames, according to strength. The next thing to be done is to keep them warm, by extra quilts on top, and keeping the entrances closed, except when it is warm enough for the bees to come out. The next thing is to feed them a little honey, or good syrup, every day, in the evening; and, whether there is natural pollen to be had outside or not, give them the artificial article inside the hive, in the shape of cakes rich in nitrogen and soaked in honey. This regime with other little matters which the common-sense of every experienced bee-keeper may suggest, will carry the bees through adverse spring seasons if anything will.

One or two other important matters occur to me which I will also mention: Sometimes, even after the bees have had a cleansing flight, if the weather is such that they cannot get out for many consecutive days (as happened two or three times this spring), they will become badly afflicted with the dysentery. In such cases, I give them a little carbolic acid in their honey, or in their cakes, with uniformly good results. The other point occurring to me is this: After you begin the stimulation of feeding in the spring, the old bees are much more apt to venture out in unsuitable weather; and in high cold winds they are lost, and never get back. It is, therefore, expedient to be on the look out, and shut them in during such weather. In many cases it would be better to carry the bees back to the cellar or other winter quarters, after they have had their flight, then to entice them outside by feeding, only to be lost.

The intelligent apiarist must use his own judgment and govern himself accordingly; and, above all things, he must watch his bees and not neglect them. As you are passing that way, it may be to other work, take a look at your bees, for you may see something wrong—something needing your attention. In bee-keeping, as in other things, "eternal vigilance" is the price of success.

The prospects here for an abundant honey harvest are excellent; indeed, almost unprecedented, so far as we can recollect. Clover of all kinds has come out this spring in a better condition than I ever saw it before; and the fruit bloom is proverbially exuberant. The trouble is, however, that bees generally are not yet strong enough to take advantage of the abundant fruit bloom. It will take to near the end of this month to get them thoroughly built up. Meanwhile, during the interval between the fruit bloom and white clover, I would suggest to the inexperienced bee-keeper the wisdom of feeding his bees a little every day, to keep up the strengthening process now going on.

Selby, Ontario, June 11, 1883.

For the American Bee Journal.

The Rearing of Queens.

E. A. THOMAS.

Having received several inquiries regarding my method of rearing queens, I will now give a description of it. The ground work of my method is doubtless familiar to the reader, and I shall, therefore, give more attention to the smaller points which many consider of but little consequence, but which I consider all important, and to which I attribute much of my success in queen-rearing.

I commence operations by hanging in a clean comb into the colony which I wish to breed from; this colony must be strong and vigorous. Having several breeding queens, I use the strongest one first. Several days previous to hanging in the comb, I begin feeding the colony and continue to do so until I obtain the eggs. I crowd the brood nest together as much as possible, removing all empty combs, so that the queen must lay in the comb prepared, if she lays at all. In this way I get a frame filled with eggs in a very short space of time, the advantage of which will appear further on. At the same time that I hang in the empty comb into the first colony, I deprive another strong one of its queen, at the same time commencing stimulative feeding, and by the time the eggs are ready, they are in the best possible condition for building cells. I then deprive this colony of all unsealed brood. Taking the comb of eggs, I cut out strips, about an inch wide, from top to bottom, leaving two inches of comb between; these I fit into other empty frames of comb, fitting them in diagonally, cutting out about an inch of comb under each piece. These frames I hang in the center of the hive prepared to receive them, and continue feeding them as before. When it is time for the cells to be sealed over, I examine the combs, and all cells that are just started and not sealed over, I cut off; and it is to this fact that I attribute much of my success. All the eggs being laid at very near the same time, I can tell just when the cells ought to be sealed over, if started from the egg when it first hatches.

After this time, all unsealed cells must have been started late from larvæ, and therefore are destroyed. This is how I get my cells started from the egg when it first hatches.

The reader cannot fail to appreciate the fact that, placing a comb of eggs in a colony, will not insure all the cells started from the egg or young larvæ, as bees will continue to start cells until the larvæ gets too large to develop into queens; but by knowing when the first cells ought to be sealed over, and destroying all after-cells, we are sure of obtaining what we desire, viz: queens reared from larvæ, fed, from the time they hatch from the egg, upon the royal jelly.

I let the cells remain in the colony where they were reared until nearly ready to hatch, and here is the advantage of having the eggs laid at nearly the same time, as it enables me to tell, within a few hours, when the cells will hatch. When nearly ready to hatch, I cut them out carefully and insert in the nuclei, cutting out enough comb with each cell to be sure and not press the cell in any way. Nuclei will very rarely destroy cells when just ready to hatch, even if put in soon after their queens are taken from them, and I am seldom troubled with loss of queens in this way.

As soon as each queen hatches, I hunt her up and examine her carefully, to see that she is all right. If there is anything about her that is not perfect, her head gets between my thumb and finger. I save only the perfect ones, as I want no others.

Now how do I mate my queens? I will tell you. I select early in the season a number of colonies which produce the best drones, and keep them continually stimulated by feeding, and give them all the drone comb they will use. These colonies will, therefore, rear an immense number of drones, and by keeping the drones in the other hives cut off, I reduce the danger of mating with poor drones to a minimum.

To some, my method of queen rearing may seem laborious, with too much attention given to small matters, but it takes labor, time and attention to small matters, to rear good queens.

Another important element to success, is care and skill in selection. I aim, in selecting, to combine all the characteristics of a good strain of bees, breeding from beautiful, prolific mothers, and rearing drones from the most hardy and industrious colonies. Such a queen, mating with such a drone, cannot fail to produce fine offspring. And by continual selection from each generation, I am all the time raising my bees to a higher standard of excellence.

Coleraine, Mass.

For the American Bee Journal.

Preparing for Winter.

L. R. JACKSON.

Successful wintering of bees, in the North, is one of the most important subjects with bee-keepers. This, I think, is any easy thing to do, if we commence in time to prepare for the coming winter. I have always commenced in June to prepare for winter, and have always been successful in my 8 years experience, having never been troubled with "spring dwindling" but one year, and that was when I fed the bees with rye flour early in the spring.

Honey contains sugar in two forms: Cane sugar and grape sugar. Clover honey contains more cane sugar than fall honey, and is more easily and more thoroughly digested than grape sugar, or fall honey, and should be used for winter stores.

Our bees now have honey enough to winter them, with all the increase we shall have, and, as soon as it is well ripened, we will put away 2,000 pounds for winter. Then we can take honey with no fear of our bees starving next winter.

I have never known as good a prospect for a large crop of honey as we have this year, or known bees in a better condition for gathering it than they are now. Nearly all our bees are working on 20 Langstroth frames, and are crowding the queen, in spite of all we can do, unless we extract the honey before it is ripe, which it will not pay to do.

We have rain about three days in the week, yet it does not seem to stop the flow of honey as it usually does. I had prepared to run the bees for increase until I saw what the harvest was going to be, when I changed my plans, and it has crowded me with work, so that I have had to hire extra help, and work from 4 a. m. until 8 p. m. to keep up with the bees.

I have given a few hints for wintering, which can be understood by any who wish to profit by them, and in September I will give my plans for packing.

Urmeyville, Ind., June 11, 1883.

For the American Bee Journal.

Honey Plants of Louisiana.

J. A. SMYTHE.

I see by a late copy of the BEE JOURNAL, that apiculturists, in general, have the blues; in this section we are all trying to excell each other in blueness. The spring was very late, and was followed by cold rains.

Most of us made our increase during March and April, while the willow and oak trees were in bloom; since then, bees have not gathered enough to support themselves. Our bees all have to cross a lake a mile wide, to a willow bank, for their principal supply of honey; the contrary winds and cold rains have caused thousands of them to fall into the water to rise no more. As June, July and August are our great honey months, and as no one has taken honey yet, most of us have lost all hope of making more then expenses. One of my neighbors, who has nearly 400 hives, has spent $500 upon them, this year, in improvements; he does not even expect to make expenses.

For the benefit of Northern readers, I give a list of our best honey plants with date of commencing and end of bloom. It is the result of two years observation, and is generally accepted in this section. Plum, apple and peach, from Feb. 1 to 27. Willow, Feb. 1 to April 10. Oak, March 15 to April 1. Orange and China trees commence blooming March 15 and last two or three weeks. Clover and dewberries bloom in March, but cannot be depended upon. Bees seldom obtain much honey from fruit trees, owing to the cold rains. The willow and oak are our stand-bys. Orange trees are rather scarce; China only yields honey early in the morning.

For the summer months we have corn, elder, sweet bay, crape myrtle and clover, besides countless vines and swamp plants which produce more or less honey. Corn, elder and clover are our best honey plants; bees working upon them all day long; sweet bay only produces honey after a rain; crape myrtle give large quantities some years, while in others it is perfectly barren.

I have seldom seen bees upon cotton, although Prof. A. J. Cook classes it among honey-producing plants.

During the swarming season, our bees (Italians) seldom wait for capped queen-cells before swarming; sometimes swarming without leaving even a sign of a qeen-cell.

Hermitage, La., June 11, 1883.

For the American Bee Journal.

Wood Separators.

F. M. REEDS.

I have been waiting for some one to give his experience with Dr. Besse's wood separators, but as none have reported their success or failure with them, I thought I would write a few lines concerning my own failure. I had for sometime, before noticing his article, been reflecting in regard to wooden separators, and, in fact, had sawed out some by hand, which, by the way, is a very particular job, if sawed as thin as should be; but as soon as I saw his article, I thought I had struck a bonanza, for cheap separators; so I sent an order for 350, which were received all right and in due time. But with me, they have proved a complete failure; they having been cut out of green elm, like all elm lumber, warp and twist as soon put in between the boxes, in such a manner as to render their use impossible; and while I do not doubt that the Doctor is still, and has been all the time, honest in his effort to supply the long-needed cheap separator, I have no doubt, in my own mind, that he has made a sad failure; as they are cut out of elm timber. The boards were nicely cut, and would, no doubt, have made fine separators had they been cut of timber which would not warp, and if some one will get them up as nicely as those I received, of some kind of lumber that will not warp, I will try some more, for I believe the day is not far distant when they will be the only separator used. I am now cutting some by hand from pine lumber, which does not warp.

I see a great many notions in regard to deep and shallow frames. Now, I have used two kinds or two widths of combs, 7 and 8 inches, with hives

19¾x15 inches, using 10 frames to the hive, and I prefer the 7 inch frame, and am cutting all my combs to that width. I find they are easier to handle, contain an abundance of surface for brood-rearing, with plenty of honey for wintering, and it gives, I think, superior advantages in honey gathering.

The season has been very cold and backward here, up to June; since then, we have had too much rainy weather. White clover is abundant, and bees are doing well, when they can, they work strongly and store some surplus, but are not swarming.

Hinesborough, Ill., June 11, 1883.

For the American Bee Journal.

Antidote for Bee Stings, etc.

E. H. THURSTON, M. D.

The sting of the honey bee makes cowards of many brave, strong men. Were it not for this, the army of bee-keepers would have many new recruits each year. The bees, though small compared with man, but few are willing to meet in combat.

There has been some inquiries for an antidote for the poison of stings. Some bee-keepers laugh at the idea of an antidote, while others make very earnest inquiries for it. I have been experimenting with various articles, and have found, I think, a true antidote. It may not be new to many, but I feel confident, all who are affected by the poison, will appreciate its value. It is carbonate of amonia. It should be powdered and kept in a tightly-corked bottle. I always carry a small phial of it in my pocket, which I use in my practice. When I receive a sting, I wet the surface over the sting, and apply a small amount of it. The pain is relieved immediately, and it never swells.

I was called a few days ago to see a child, about 3 years old, who, in childish play, put a stick into the entrance of a strong colony of bees. They stung him very badly on the head, face and neck; there were not less then 100 stings. I had him bathed with a strong solution of carbonate of amonia, and gave him a solution of some of it inwardly. The next day one could not tell that the little fellow had been stung at all.

Did you, Mr. Editor ever hear of roast chicken as bee feed? We have a box-hive bee-keeper, in this county, who says that every winter he cooks a chicken and puts it in his hives for the bees to feed on; that they eat it all up clean, not leaving anything but clean bones. This is new to me.

Bees are just beginning to work on white clover. May was a hard month on them. The cold, snow and rain prevented them from building up, but they are now doing well.

Hagerstown, Ind., June 9, 1883.

[Yes; we *have* heard of such before; some cook eggs and puts in the hives; others give them whisky—but all these notions belong to the superstitions of the past, with that of "telling the bees of a death in the family," and refusing to *sell* them, because it is *unlucky* to do so, etc.—Ed.]

Read before the Texas Convention.

A Few Thoughts on Marketing.

DR. J. P. H. BROWN.

That there is a pleasure associated with the production of an article, whether it be a thing of beauty or something that administers to our health or happiness, cannot be denied. The amateur florist goes into ecstacy as he watches some rare flower bud and unfold its petals and display its gorgeous tints. The fruit culturist glories in the production of a specimen of some rare apple, pear, peach, grape or berry; while the apiculturist prides himself in his bees and in the production of tons of honey. He loves to see the product of his little pets. But aside from the mere pleasure of production, there is probably a greater pleasure to know that we can dispose of the product for dollars and cents, and be thereby rewarded for our labor.

True, the production of honey is much easier than it is to find a market for it, still I am satisfied from my own experience and from the experience of others, that markets can often be made where before there were comparatively none. As a general thing, the nearer home the market is, the better it is for the producer. High freights and commissions are pretty certain to eat up the profits. There is not a town nor village in the South where a trade in honey cannot be established if the proper means are taken to introduce it. There can be no excellence without labor and exertion, and there can be no honey market without the right kind of efforts. Up to within a few years past, our Southern honey went to market in the worst possible condition—mashed and messed along with pollen, dead bees and juicy larvæ, in old buckets and tubs, presenting everything but an inviting appearance to the purchaser. Such stuff, instead of inviting the buyer, has a tendency to engender disgust. But with our modern appliances for obtaining honey, there is no longer an exense for any such bad-conditioned honey to come on the market. It has been pretty well settled by the largest honey producers of our country, that honey put up in small packages sells the most readily, particularly at home markets. Compactness, neatness and attractiveness are essentials to be observed on the part of the producer. Many persons who may at first buy a small package, will soon return and want a larger.

When we cannot sell our honey directly to the consumer, then we have to send it to the middle-man or commission merchant. And right here it should be remembered that not one grocery merchant in fifty knows how to handle honey. The expert salesman, like the expert producer, must have a natural fitness for the position. When a merchant is willing to undertake it, and displays the necessary tact and ability to introduce the commodity to his customers, the bee-keepers of the neighborhood should sustain him; because there would be a likelihood of his better being able to keep up the price and extend the sales, then if it was put in the hands of half dozen grocerymen of the town to sell at all sorts of prices, and to be offered in all sorts of shapes.

Although honey was one of the first articles of sweetening that man knew anything about, and the exclusive article for thousands of years, still at the present day the majority of people know comparatively nothing of its properties, and the multitudinous uses to which it can be applied. The people should know of its remedial qualities; they should know that it is pure, and the syrup that God prepares in the laboratory of the flower, and that it would be far better to use it in their families to the exclusion of the adulterated and glucosed syrups that breed disease and death. Bee-keepers' wives should go to the conventions, associations and fairs and display their honey-cakes and their honey preserved fruits. This would attract attention, and give honey a prominent place in the culinary art. If bee-keepers were to distribute pamphlets calculated to educate the people upon these questions, great good would result in the increased consumption of honey; and I know of nothing better for this object then a little book entitled: "Honey as Food and Medicine," published by Thomas G. Newman, of the AMERICAN BEE JOURNAL, Chicago, Ill.

When it becomes necessary to ship honey long distances it had always better be extracted, well cured before barreling, put up clean, and the barrels should be secured against leaking. It is very annoying to a honey merchant to find a consignment of honey come in a leaking condition—the car floor covered with it, and a stream of it running across the depot—all owing to the carelessness of the shipper. If bee-keepers desire good markets and good prices for their honey, they must encourage concert of action among themselves, be faithful and vigilant, and offer their product in the neatest, most attractive and secure manner.

Augusta, Ga.

Local Convention Directory.

1883. *Time and Place of Meeting.*

June 30.—Fulton County Iowa, at Astoria, Iowa.

June 30.—Central Kansas, at Manhattan, Kas.
Thos. Bassler, Sec.

Aug. 29.—Iowa Central, at Winterset Fair Grounds,
Z. G. Cooley, Sec. *Pro tem.*

Sept. 12-14.—Tri-State, at Toledo, Ohio.
Dr. A. B. Mason, Sec., Wagon Works, O.

Oct. 9, 10.—Northern Mich. at Sheridan, Mich.
O. R. Goodno, Sec., Carson City, Mich.

Oct. 17, 18.—Northwestern, at Chicago, Ill.
Thomas G. Newman, Sec.

Oct.—Northern Ohio, at Norfalk, O.
S. F. Newman, Sec.

Dec. 5-6, Michigan State, at Flint.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars time and place of future meetings.—Ed.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

☞ Several have asked questions upon the following topics, which I hereby endeavor to answer:

Introducing Queens.

I practice two methods. If I have a very choice one, and wish to take very little risk, I operate as follows: I kill the reigning queen, and put the new one to be introduced into a wire cage between the combs, and atfer 24 hours I open the hive, and if I see the bees "balling" the cage (that is, 2 and 3 deep upon it, savagely trying to force an entrance), I close the hive for 24 hours more, and so on till I see the bees crawling over the cage in an unirritated manner, then I pull the stopper to the cage, the open end placed close to the entrance, and with smoker in hand, smoke the queen in, and smoke the bees, by puffing right in after her.

If the queen is of only ordinary value, I smoke her right in without any of the previous caging. I have had almost uniform success with the latter method, what little I have used it. Two points of caution are in order. Never introduce any workers with the queen—just the queen *alone*. Never open or otherwise disturb the colony under five days from the date of introduction.

Using Comb Foundation.

In using comb foundation I always use it in full sheets above and below. Any person who has ever used a Parker foundation fastener, will never mention melted wax or any thing of the sort. Next to the Parker fastener is a good strong putty knife. Beeswax at a temperature of about 100° can be mashed on to smooth wood much firmer than it can be melted on.

Good comb foundation, to use in brood frames and sections, is worth to the user $2 or $3 per pound. As guides and starters it is worth more than $5 per pound, which, if granted, shows how much they lose who fail to use it in *full sheets*, and how much *more* they lose who do not use it at all.

One word of caution here too. Never fail to use foundation, full size, in sections resting upon a hive that has all worker combs below. If you do, and thus give the bees a chance to build drone comb in the sections (one that they will surely improve), there being no chance for drone brood below, you will be almost sure to be annoyed with it there.

Capping Honey, Ants, Feeding, etc.

1. Please tell me what I can do to make my bees cap their comb? They are drawn out, until they are all out of shape and joined to the separators. What can I do to make them cap it?

2. Will salt, to keep off ants, injure the bees at all?

3. Shall I feed any now, in New England States? I am a beginner, so please answer questions which seem simple to others, but not to me.

HELEN L. RICHARDS.

Longwood, Mass., June 15, 1883.

1. Never having seen such a case, where all was normal, I can hardly tell you how to proceed. I think if I knew *all* the conditions, I could advise what to do.

2. No; it will not injure bees; and, I fear, not keep off the ants either.

3. I would advise you not to feed except at times when stores are needed to prevent starvation. Such can hardly be the case with you, after the date of your question.

Where is the Old Queen?

On April 10, 1883, my Italian colony No. 1 swarmed, and I hived the swarm in hive No. 2. Colony No. 1 has swarmed twice since; I put them in hives No. 3 and 4, as they came off. Now, colony No. 2 has swarmed twice also, which I put in hives No. 5 and 6 as they came off. What I wish to know (as I am an A B C scholar), where is my old queen? As she is very prolific, I wish to rear queens from her to Italianize my blacks with, as I think it probable that the young queens became fertilized by my black or hybrid drones. Colonies No. 3, 4 and 5 will, from present indications, swarm in a few days. The gentleman whom I bought my hive of Italians No. 1 from, last year, had only 2 colonies, in the spring of 1882, which were in patent hives, and they were glued up so that the bees were allowed to swarm as they thought best. They began swarming in April, and continued, they and their increase, until Aug. 15, at which time they had increased to 27. Seven of them went to the woods. This is no hear-say or exaggerated bee tale, but is a positive fact, and I would say (lest some one should think this a cheap advertisement), that the gentleman or myself either have no bees to sell, nor do we rear queens to sell, but we wish to keep our stock for rearing as near their present condition as possible. I have several colonies of blacks and hybrids that have not swarmed this year. Some I divided, but I prefer to let them swarm themselves, unless I had a good Italian queen to give them. I found 4 colonies of bees in trees lately, one of which was yellow bees, and the most peaceable colony I ever handled, and the queen was the largest insect I ever saw in the shape of a honey bee. Almost all the trees I cut, were very rich in honey.

Mr. Heddon's answer to my 4th question in the BEE JOURNAL of May 23, is not exactly correct, for the bees had plenty of room inside, for some of the colonies were new swarms that had been hived but a few days; nor was it hot weather that caused the bees to lay out, for, on the contrary, it was moderately cool. Try again; I confess I cannot tell.

We have plenty of rain; wheat and oat harvest is almost over, and we are expecting a continued honey harvest, from the buckwheat, as well as the wild flowers, which are kept blooming by the bountiful seasons.

D. F. MARRS.

South Bosque, Texas, June 11, 1883.

Your queen went with your first swarm from No. 1 to No. 2. When colony No. 2 swarmed the first time, your old queen went into No 5, where she now is, if no mishap has occurred. My answer to your 4th question, which I have just re-read, is the best I can give, unless perhaps I were on the ground and looked more closely into details.

Why is This?

I have a first swarm of Italian bees with a fine 2-year-old queen, came off the middle of May; her young brood that she is hatching, is as black as any black bees I ever saw. They were as fine looking Italians, when I hived them, as I ever saw. I know it was a first swarm, for in 9 days I got a second swarm from the same hive. How do you account for it?

FRANK A. EATON.

Bluffton, Iowa.

By some "hook or crook," either in hiving or otherwise, your "2-year-old" Italian queen got displaced by a black one, and this black one can hardly be the daughter of the "2-year-old," or some "bands" would show upon her workers.

A Diseased Colony.

I have a colony of bees in my apiary that are suffering from some cause which I am unable to help. Young bees, unable to fly, crawl out of the hive and die; their bodies are distended and apparently filled with honey. My bees are working well on white clover, and have been for a week; still there is no change in this colony. What is the cause, and what the remedy?

W. D. SIMONDS.

Augusta, Mich., June 12, 1883.

Having never had a case of the kind mentioned, from all I can imagine, by the symptoms given, I am unable to say what the trouble is. Were the case mine and I had confidence that the trouble was more than temporary, which you seem to have, I would fall back to my favorite remedy, namely, destroy the queen and re-queen them from one of my very best colonies—best for qualities.

SELECTIONS FROM OUR LETTER BOX

Magnificent Honey Harvest.

We are in the midst of a magnificent honey harvest. Bees are just booming, and everybody who has bees are happy. Isaac Sharp.

Waveland, Ind., June 20, 1883.

Bloom Late, but Welcome.

I do not complain of the weather, Providence controls that; if man controlled it, it probably would not be as good as it is. My bees, that I had packed in sawdust, came through all right, except one brown German colony, which was queenless. They were strong in bees, and I sent to South Carolina for a queen; she arrived on May 5; I introduced her on the 6th, and in 14 days, when I opened the hive, she had 7 combs filled with brood and eggs, and now the young Italians are flying, when the sun shines. Of my bees in my summer and winter house, those on the South side, came out strong; those on the North side are weak, and 2 colonies swarmed out. White clover is blooming in abundance; the fields and roadsides look white. It is late, but welcome. I. N. Becker.

Oakfield Centre, June 14, 1883.

White Clover Never Better.

Bees have done well during the past two weeks; they are storing surplus honey very fast, and swarming still faster. Some of my neighbors, who work "on the old fogy plan," have a great deal of trouble with swarming. One man had four swarms from one colony in a month. The great trouble is, they wait until fall before putting on surplus arrangements, and as we have such an abundance of clover bloom, this season, the bees want room. The white clover crop was never better. Emil Nebel.

High Hill, Mo., June 15, 1883.

Honey from Black Walnut Trees.

The prospect for a crop of honey in Lucas County, Iowa, is better then an average, at this season of the year. Bees never wintered better. I had drones flying on March 12, and had to give 12 colonies their upper story on April 27, to prevent swarming. I took off 200 pounds of buckeye and crab-apple honey. The bees never commenced killing the drones until June 1; and then but few. White clover is now plenty, and I have commenced to extract again. Everything that has bloomed this spring has furnished an abundance of nectar. I never knew before that black walnut furnished honey; the bees worked on it equal to linden, and I extracted some 50 pounds of walnut honey; it is dark and strong, and hardly fit to eat; the bees left the clover for the walnut. We have had lots of rain and some cold spells, but that "silver lining" is seen, and we shall have another big honey crop in Iowa, this year; it is so wet that the smartweed has possession of corn fields, and smartweed never fails. Last year I had to feed the bees until July 1; this year bees swarmed on May 1, and have kept it up ever since. I have 5 from 1, all natural swarms; the after swarms I divided, to save the young queens; 1 swarm had 3 queens. Linden promises well, and my bees are strong. We cannot help getting a big crop of honey, as soon as the linden blooms. White clover was never as good, but there was too much rain for clover. Wm. Malone.

Oakley, Iowa, June 18, 1883.

Average Crop of Clover Honey.

Since I wrote last, we had floods of rain; our honey crop is cut short; white clover is about done, but we have already secured better than an average crop of nice clover honey. I hope some of our Northern bee-keepers will exhibit honey, bees, and supplies, at the Louisville exposition. We have secured space, and will exhibit. It will be opened the first week in September. N. P. Allen.

Smith's Grove, Ky., June 21, 1883.

Bees Transferring Eggs.

The fact that bees sometimes move eggs for queen-cells has been thoroughly tested and positively proved in my apiary this spring. On the 23d of May I removed the queen and one frame of brood from a colony, and inserted a frame of foundation. On one side of the new frame was a nail which projected about an inch. On the head of this nail was built a large fine queen-cell which contained an egg. In a few days it was hatched and capped over. On the third examination it was, as all may know, much to my regret, accidentally bruised. Although I have believed for a long time that bees will sometimes move the eggs or larvæ, yet I have never before seen it so plainly illustrated. T. A. Hongas.

Henderson, Iowa, June 14, 1883.

Honey Harvest Prospect Never Better.

The prospect for a good honey crop in this vicinity, was never better. The cool weather about the 21st of May, did us no harm, though fires and thick clothing were not uncomfortable for two or three days. I commenced the season with 89 colonies; and during April and May I had 30 swarms. I look for a big swarming spree in a few days, as the hives are well-stocked with bees and brood, and I notice a few have queen-cells started. I have already taken 600 pounds of comb honey and 410 gallons of extracted, and will take out about 2 pounds (or 90 gallons) more next week. From the crossest colony of hybrids I ever saw, I took, yesterday, 4½ gallons of extracted honey. The hybrids have given me more honey to the hive, than the pure Italians. As honey gatherers they far exceed the pure Italians; but they are crosser even than the blacks. I have a colony of blacks I would not exchange for the best Italians I ever saw; they are very gentle, and are good workers. Last season they gave me 184 pounds of fine comb honey, in one-pound sections, which I sold for 20 cents per pound, $33.12. I use the Langstroth frame so far as length and depth goes; in the upper story, for extracting, I use 8 frames 1⅜ inches wide, which, after 5 years of trying other kinds and sizes, I find to give the best results. I extract often. Chas. H. Kincade.

Sterling, Ark., June 16, 1883.

Bee-Keeping in Utah.

Since I wrote you last Thos. W. Lee and myself have been down to Grantsville to organize a branch association of the Territorial Bee-Keepers' Association. Grantsville is situated on the west side of the Tooele Valley, and boasts of the first bee-keepers in the county, but for all that, Tooele city is a little ahead of them in bee-culture; for out of 17 bee-keepers, they have only one extractor; most of them getting comb honey without the section boxes. The swarming season is now in full blast, with myself it is about over. John Dunn.

Tooele City, Utah, June 14, 1883.

Everything is Booming.

Our bees are firing their big guns. They wintered well. There never was such a fine prospect for white clover; bees are filling up the sections finely. Our rains are just right, and poplar is just blooming; linden will bloom this month, and soon after comes the sweet clover. Our honey crop is very good, and everything is booming. C. S. Newsom.

Athens, O., June 13, 1883.

Rain, Rain, Rain.

The bees in this part of the country are having a hard time, on account of the excessive rain. Hives are full of bees and brood, and a great deal of white clover is in bloom, but we have rain nearly every day, and streams are high most of the time. Our honey crop was an entire failure last year, owing to continuous rains during clover bloom, and our hopes of a honey crop, this season, grows less, day by day. Clover is the main dependence in our locality, and there is not an ounce stored in surplus boxes yet. W. J. Davis.

Youngsville, Pa., June 20, 1883.

Bees Strong in Numbers.

Bees in this neighborhood are doing finely, considering the cold wet spring we had. They are not storing any surplus honey yet, but are increasing in numbers amazingly. The hives are all crowded full of bees, and there has been several fine large natural swarms already. We expect a good harvest of honey. J. M. Ross.

Tecumseh, Neb., June 15, 1883.

Well Done.

On page 300, Mr. J. O. Sherman gives a candid, clear report of what he has done by crossing bees, and what stock he used to do it with. Mr. S. is recognized by those who know him at all, to be a man of scientific turn of mind, as well as undoubted integrity. He did just what I have been doing for several years past, and any one who does thus, will become another witness to the living truth. May I be so impertinent as to ask Mr. F. I. Sage to give us the names of the Michigan bee-keepers whose honey he has handled, and the amount handled from each person named. Such statistics might throw much light on the separator question; at least, as far as Michigan producers are concerned. JAMES HEDDON.

Dowagiac, Mich., June 15, 1883.

Profusion of Basswood Bloom Expected.

We have a few colonies that have stored 32 pounds of comb honey from apple blossoms. Bees are in fine condition. Alsike clover, white clover, and raspberries are in full bloom, but it is too rainy and cold. Basswood gives evidence of great profusion of bloom. Please tell us, through the BEE JOURNAL, if you have had any experience with the honey plant known by the name of *clethra alnifolia* or white alder. I see it recommended by some bee-keepers, but would like your opinion of its merits.

A. W. OSBURN.

Water Valley, N. Y., June 18, 1883.

[Personally, we have not. It blossoms from July to September, when there are are few other flowers. The honey from it is "about white, thick, and of fine flavor." It will grow in any soil, and is perfectly hardy; but it does best in a moist, rich loam. Several have reported, in the BEE JOURNAL, its excellent qualities for honey.—ED.]

Letter from Whitley County, Ind.

I am a beginner in the new method of bee-keeping (with movable frames), though having some experience in the old way with box hives. Last fall I purchased a colony of Italians of a neighbor in a Quinby hive. I kept them out during the winter, protected with chaff matting in the upper story and wraped with strips of carpeting on the outside; they wintered splendidly, and came out all right this spring, casting a large swarm on the 15th, which was hived in a Quinby hive, and are doing well so far. We have a great abundance of white clover in bloom now, and the "little busy bee improves each shining hour, from early dawn to dewy eve," on its fragrant bloom. We have another plant here that I have not noticed anything mentioned by any correspondent of the BEE JOURNAL as a honey-producer; it is known here as ground ivy, the botanical name I do not know. It is a trailer, and grows from 7 to 10 inches high; blossoms about the middle of May, and continues for a long while in bloom; and, at the present writing, its vines are full of blue blossoms, on which the bees literally swarm from morning till night, almost forsaking all other blossoms; it grows spontaneously, and we farmers have considered it a great nuisance, on account of its tenacity of life, spreading through our meadows and yards, almost taking possession; but if it is a great honey plant, we, who keep bees, will be able to tolerate its presence on account of its honey secretions, if it possesses them. Please say if it is known to you as a valuable honey plant. We have also here in northern Indiana, a great amount of the linden and basswood, which bloom here about the middle of July. Our spring has been wet and cold, and bees have had a hard time, but the last few days have brought us warm, if not sultry weather, and now they are getting ready for business. A bee-keepers' convention or association has been formed in Whitley county, and its members meet once a month to discuss apiarian subjects. Among its members who have given it much attention, I will mention the names of Levi Mosher, H. H. Lawrence, Wm. Kelsy, and Joseph Sumners; the last named is, perhaps, the best posted, in reading and experience, of any man in the county; he has about 80 colonies of the Italian, and uses extensively the improved Quinby hive, and thinks it the best for all purposes; the only objection being the depth of the brood-chamber for convenient handling. W. H. W.

[Ground ivy has many excellent qualities. It will grow almost anywhere, and under the most adverse circumstances. It is a proverbial bloomer, and yields excellent honey in abundance.—ED.]

Heavy White Clover Bloom.

We are having a heavy crop of white clover, but bees have had but little good of it yet. Out of the last 78 days it has rained, more or less, 41 days; some days all day, and all night too. I have had no swarms yet, out of 79 colonies. By feeding, I have kept my bees in good condition, and hope to have some honey yet.

S. L. VAIL.

Coal Creek, Iowa, June 19, 1883.

The Season in Scotland.

The weather has been very severe all winter, and the spring has been exceedingly cold and bitter, so that our bees, throughout the whole country, are in a very backward state. As far as the season has gone there is no great prospect of us having a good harvest. We are busy preparing for our annual show, which takes place at the end of July, in Inverness, in the North of Scotland, a good distance past "Perth." I will send you one or two schedules, and will be very glad if you or any friends could send any exhibits to it.

JOHN D. HUTCHINSON.

Glasgow, Scotland, May 31, 1883.

Bee-Culture in Nebraska.

Bee-culture is fast becoming one of the leading industries in this State, and all we need is correct knowledge to make a grand success of it, having all the other requisites all ready furnished by nature. JOHN HAMMITT.

Wahoo, Neb., June 15, 1883.

Rearing Pure Queens.

I have 4 colonies of hybrid bees (a cross between the black and Italian) in moveable frame hives, into one of which I introduced an Italian queen about a month ago, and the young Italians are now beginning to be seen at work. I should like to Italianize the other 3 colonies, but do not know how to go about it, owing to the fact that black drones are found in all 4 hives. Will you please inform me in the Weekly JOURNAL, when and how I can manage so as to rear queens and have them fertilized by Italian drones, and greatly oblige? J. F. C.

New Orleans, La., June 16, 1883.

[It cannot be done with any degree of certainty. The only way will be to obtain fertilized queens.—ED.]

Work I Have Accomplished Alone.

As all the reports I see published are rather discouraging, as regards the honey crop, I will give my report for this season, so far. My bees started off well in the spring, and carried in the first pollen on Jan. 28. I had my first swarms on March 2. Linden commenced to bloom on May 15; then wild China and horsemint; and now elder is blooming. I commenced extracting on June 4. I have now extracted 5,500 pounds, and have 1,000 pounds of honey in one-pound sections, and I did all the work myself, except the winding up of my buckets and drawing the honey from a large tank into small vessels, which my better-half did for me. I started with 125 colonies; and extracting and attending to the swarms, kept me stepping about pretty lively. I have reports from all the principal parts of our State, and nearly all are feeding their bees. My honey is pronounced by all as equal to white clover honey, and weighs a little over 12 pounds to the gallon. J. W. ECKMAN.

Richmond, Texas, June 18, 1883.

Too Much Wet Weather.

Bees are doing splendidly this spring, considering the kind of weather we have had. White clover has been in bloom since the latter part of May, and the fields are white with it, but the bees do not get more than three days in a week in which they can work. When it is not raining, it is so cloudy and cold that the bees cannot get out; they have not been out now for three days. I extracted about 75 pounds of honey, and have some of them working in sections. Last year I got no surplus before Aug. 1; that is our regular time for surplus. I could not consent to do without the BEE JOURNAL, or miss one number. RICHARD GUNSELL.

Baden, Mo., June 18, 1883.

Fuel for Smokers.

Some writer in the AMERICAN BEE JOURNAL once said he had found out a good use for old almanacs, by saturating the leaves in a strong solution of salt-peter, then dry and use with cotton rags in the smokers. I have always been troubled about fuel for smokers till I tried this. Take two pieces of print paper, about the size of almanac leaves, prepared as above, which should be rolled with the cotton rags and ignited and put in the smoker. This will make a good, enduring and constant smoke. The salt-peter is a good disinfectant, and is a positive benefit through its use. Try it, brother bee-keepers, and report. D. HIGBEE.

Avoca, Iowa, June 16, 1883.

How Bees Wintered in Wisconsin.

I have traveled over four towns, and have made a careful inquiry of every bee-keeper I have met, and I am now satisfied that the losses during the last six months amount to not less than one-third, nor more than one-half of all the bees in this county. The losses are about equal to the losses of two years ago. As to the causes, it is very difficult to determine exactly. A long, cold winter, followed by a cold spring, is the first thought; but that some have wintered their bees without loss while others have lost all, proves that there are other causes than the cold. I have lost more bees during the past winter, than in all my life before, and I have kept bees for ten years. I have lost 50 out of 120 colonies. I left 5 colonies out; 3 well packed in chaff hives, and 2 with no protection. All died. The balance were stored in three cellars. Cellar No. 1 was very cold; everything froze solid; and three-fourths of the bees died. Cellar No. 2, under my house, was dry; temperature from 34° to 40°; generally about 36°. Bees suffered badly, but were much better than in No. 1. In both these cellars, both upward and downward ventilation was given freely. Of 90 colonies put in these two cellars, I have 48 left. Cellar No. 3, under another house, contained 26 colonies; 22 of them are alive; 20 of them are strong and about to commence swarming. These were given little or no upward ventilation. Were put in the cellar before freezing. I shall ventilate my cellars to keep the air purer, and make them a little warmer the next cold winter, and, if possible, use ice to keep the temperature down during a winter thaw. F. WILCOX.

Mauston, Wis., June 18, 1883.

Piling in the Honey.

I have 90 colonies doing well, and piling in the honey; I find the BEE JOURNAL of great benefit in their management. J. MCCONNELL.

Clay Village, Ky., June 14, 1883.

Fine Flow of Honey.

We are having a fine flow of honey now in this part of our State from white clover. DR. J. COOPERIDER.

Taylorsville, Ind., June 18, 1883.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1 year, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with $6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For four subscribers, with $8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with $10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

☞ Do not send coins in a letter. It is dangerous and increases the postage unnecessarily. Always send postage stamps, for fractions of a dollar, and, if you can get them—*one-cent* stamps; if not, any denomination of postage stamps will do.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Special Notice.—We will, hereafter, supply the Weekly BEE JOURNAL for one year, and the seventh edition of Prof. Cook's Manual of the Apiary, bound in fine cloth, for $2.75, or the Monthly Bee Journal, and the Manual in cloth for $1.75. As this offer will soon be withdrawn, those who desire it should send for the book *at once*.

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

Bingham Smoker Corner.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent post-paid for **$1.75.** Address,

BINGHAM & HETHERINGTON,
Abronia Mich.

All Excelling. — Messrs. Bingham & Hetherington. Dear Sirs:—I am now selling your Smokers almost exclusively. You are excelling yourselves in smokers all the time.

Respectfully, J. G. TAYLOR.
Austin, Texas, May 10, 1883.

Cyprians Conquered.

All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's "Conqueror Smoker" did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham.

G. M. DOOLITTLE.
Borodino, N. Y., Aug. 15, 1882.

During the following three months, Bingham Smokers will be sent post-paid, per mail, on receipt of the following prices:

The "Doctor"..	(wide shield)—3½	in. fire tube,	$2.00
The Conqueror	(wide shield)—3	in. fire tube,	1.75
Large...........	(wide shield)—2½	in. fire tube,	1.50
Extra...........	(wide shield)—2	in. fire tube,	1.25
Plain............	(nar. shield)—2	in. fire tube,	1.00
Little Wonder..	(nar. shield)—1¾	in. fire tube,	.65
Bingham & Hetherington Uncapping Knife..			1.15

With thanks for letters of encouragement, and the absence of complaining ones, we tender to our thirty-five thousand patrons our best wishes.

Very Respectfully Yours,
BINGHAM & HETHERINGTON.
Abronia, Mich., June 1, 1883.

☞ We have received a photographic view of "Rose Hill Apiary," Belleville, Ill., "with the compliments of E. T. Flanagan, proprietor." It presents a nice view, and hangs on our office wall.

☞ Do not let your numbers of the BEE JOURNAL for 1882 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

☞ May we ask you, dear reader, to speak a good word for the BEE JOURNAL to neighbors who keep bees, and send on *at least one new* subscription with your own? Our premium, "Bees and Honey," in cloth, for one *new* subscriber to the Weekly, or two for the Monthly, besides your own subscription to either edition, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ The Central Kansas Bee-Keepers' Association will meet at Manhattan, Kansas, on June 30, 1883.

THOS. BASSLER, *Sec.*

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

☞ Articles for publication must be written on a separate piece of paper from items of business.

TO ADVERTISE

OVER THE WHOLE COUNTRY

WITH A SMALL LIST.

Advertisers desiring to reach every section of the country, without investing a very large amount of money, will find the following a good list of papers:

			Price per line.
BOSTON, MASS..	Journal	Weekly	$ 15
	Congregationlist	Weekly	25
	American Cultivator	Weekly	30
	Youth's Companion	Weekly	200
NEW YORK CITY	Sun	Weekly	50
	Times	Weekly	50
	Tribune	Weekly	100
	Christian Advocate	Weekly	50
	Harper's Weekly	Weekly	150
	Observer	Weekly	30
	Witness	Weekly	75
Philadelphia, Pa..	Times	Weekly	25
	Press	Weekly	25
BALTIMORE, Md.	American	Weekly	20
LOUISVILLE, Ky.	Courier-Jouroal	Weekly	60
CINCINNATI, O..	Times	Weekly	50
	Enquirer	Weekly	75
	Commercial-Gazette	Weekly	65
TOLEDO, OHIO..	Blade	Weekly	50
CHICAGO, ILL...	Inter Ocean	Weekly	75
	News	Weekly	40
	Tribune	Weekly	25
ST. LOUIS, MO...	Republican	Weekly	50
	Globe-Democrat	Weekly	50
San Francisco, Cal.	Chronicle	Weekly	37
TORONTO, ONT..	Globe	Weekly	25

Price per line in all the papers.............**$14 47**

Ten lines, one time, costs **$144 70.**

A DEFINITE OFFER.

For **$140** net cash we will insert **10** lines, agate space, one time, in all the above 26 papers, and *give* one insertion, without further charge, of the same advertisement in **350** country weeklies, with a guaranteed circulation of more than 175,000 copies. For **$75** we will insert **5** lines once, or **3** lines for **$50.** Catalogue of the weeklies sent on application.

If the advertisement is already appearing in any of the above papers, we will substitute others of similar circulation and value. Address,

GEO. P. ROWELL & CO.,
NEWSPAPER ADVERTISING BUREAU,
10 SPRUCE STREET, NEW YORK.
25A4t

1883. NOTICE. 1883.

No more bees for sale in nucleus or full colonies, or pounds. We are about up with orders for Queens. We will be able to send Queens by return mail after July 1.

T. S. HALL,
26A2t KIRBY'S CREEK, Jackson Co., ALA.

ITALIAN AND HOLY LAND QUEENS!

The Handsomest Queens for BUSINESS the World Produces.

BUSINESS, BEAUTY and Wintering Qualities Combined.

We CHALLENGE the WORLD to EQUAL them.

Every Queen WARRANTED perfect, and reared under the swarming impulse. Tested Queens of either race, each $2.00; with "Handy Book," $2.50. Queens warranted as good as tested and "Handy Book," $2.25. **Special rates by the quantity.** Send for our 32-page Circular. 22Atf

HENRY ALLEY, WENHAM, MASS.

BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN.

Editor of the Weekly Bee Journal.

925 West Madison Street, Chicago, Ill.

It contains 160 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey Bee, and at the same time produce the most honey in its best and most attractive condition.

Appreciative Notices.

A neat and abundantly illustrated hand-book of apiculture.—American Agriculturist, N. Y.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Tenn.

Contains all the information needed to make bee-culture successful.—Eagle, Union City, Ind.

Just such a work as should be in the hands of every beginner with bees.—News, Keithsburg, Ill.

Valuable for all who are interested in the care and management of bees.—Dem., Allegan, Mich.

Engravings are fine. Gotten up in the best style, and is cheap at the price.—Farmer, Cleveland, O.

It comprises all that is necessary for successful bee-culture, save experience and good judgment. —Daily Republican, Utica, N. Y.

Gives minute details for the management and manipulations necessary to make bee-keeping a success.—Col. Valley and Farm.

Written in an interesting and attractive manner, and contains valuable information for all readers, even though they be not directly interested in the care of bees.—Sentinel, Rome, N. Y.

It is a valuable and practical book, and contains a complete resume of the natural history of the little busy bee, as well as of all that one needs to know in their care and management.—Chicago Herald.

Contains a vast fund of information in regard to bee-culture. He who would keep abreast of the times must keep posted in all the improvements in his line. We advise all interested to get a copy of this book.—Daily Times, San Bernardino, Cal.

It embraces every subject that will interest the beginner. It describes all the newest discoveries in the art by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive form. It is embellished with beautiful engravings, and is the most perfect work of the kind, for the price, that has ever come under our notice.—Farmer, Lancaster, Pa.

PRICE—Bound in cloth, **75 cents;** in paper covers, **50 cents,** postpaid.

THOMAS G. NEWMAN,
925 W. Madison St., Chicago, Ill.

ELECTROTYPES

Of Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. **THOMAS G. NEWMAN,**
925 West Madison Street **Chicago, Ill.**

THIS PAPER may be found on file at Geo. P. Rowell & Co.'s Newspaper Advertising Bureau (10 Spruce St.), where advertising contracts may be made for it in **NEW YORK.**

OLDEST BEE PAPER IN AMERICA
THE AMERICAN BEE JOURNAL
ESTABLISHED IN 1861

VOL. XIX. CHICAGO, ILL., JULY 4, 1883. No. 27.

THE AMERICAN BEE JOURNAL
Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

What to do with the Honey.

The honey crop, this year, will be simply *immense*. Mr. F. L. Dougherty, in the Indiana *Farmer*, says: "From daylight to dark, yes, away after dark, too, honey is coming at a fearful rate." And this state of things is corroborated by hundreds of letters from all over the American Continent. Not only is this so in America, but we hear that it is also true of England. The British *Bee Journal* for June 15, says: "A month's uninterrupted fine weather has amptly repaid those who were careful to get there stocks in order for the first honey *glut*, which, from reports that have come to us, has been a very heavy one. We hear of the extractor being at work and supers being filled with marvelous rapidity."

As the crop will be an exceedingly large one—the question at the head of this article is very pertinent. The markets of the large cities will be glutted—and, unless bee-keepers come to the rescue, by creating a home market, the prices will be run down very low, and sales, at the same time, will be exceedingly slow.

Every bee-keeper must take the matter in hand, and create a home market for his honey, by putting it up in attractive shape, both comb and extracted, to entice the lovers of pure sweets, making many more consumers. By the aid of small packages of comb honey, in one and two-pound sections, and small pails of extracted honey, containing from 1 to 10 pounds, an immense amount can be sold in every town on the American Continent, if the right methods are employed for creating a market.

We know of no better plan than to spread information on the uses for honey, its healthfulness and medicinal qualities, among the people in every town adjacent to your apiary.

We have given this matter much serious thought, and have concluded, in order to assist honey consumption, in the present emergency, to revise and condense our pamphlet on "Honey, as Food and Medicine" to 16 pages, so that it may be scattered like autumn leaves throughout the length and breadth of the country at a *small cost* to bee-keepers, and thus CREATE a market for our honey. Twenty thousand copies have already been sold, and we will have another edition of 10,000 copies printed by the time this paper is in the hands of its patrons, ready for immediate work. They will be printed in English and German, and may be had in either language as may be desired, or some of the German may be put in an order for 100 or more, if requested. On the first page we will print a card, *free of cost* (when 100 or more are ordered), something like this:

PRESENTED BY JOHN SHORT,
Swaneetown, Ga.
Producer of Comb and Extracted Honey.
Orders by Postal Card promptly filled.

These pamphlets will retail at 5 cents each, or 50 cents per dozen. 100 copies (with Card printed free of cost) 3 cents each; 500 copies at 2½ cents each, or 1,000 copies at 2 cents each by mail postpaid. If these pamphlets are properly distributed, they will become salesmen through whose influence every pound of honey that is produced, will find a ready and remunerative sale, and will prevent a *honey glut* in our large cities, as well as make both producer and consumer happy. Hundreds of bee men have already tried this plan, and found it to "work like a charm." If twenty thousand of these silent "salesmen" have already wrought wonders in creating a market for honey, what will a million of such faithful "workers" accomplish in the "hive of nature?" Just try it, and astonish yourselves with the results!

The Rev. L. L. Langstroth.

Again, after a lapse of nearly two years, we have received the following note from the greatest American bee-master, the Rev. L. L. Langstroth:

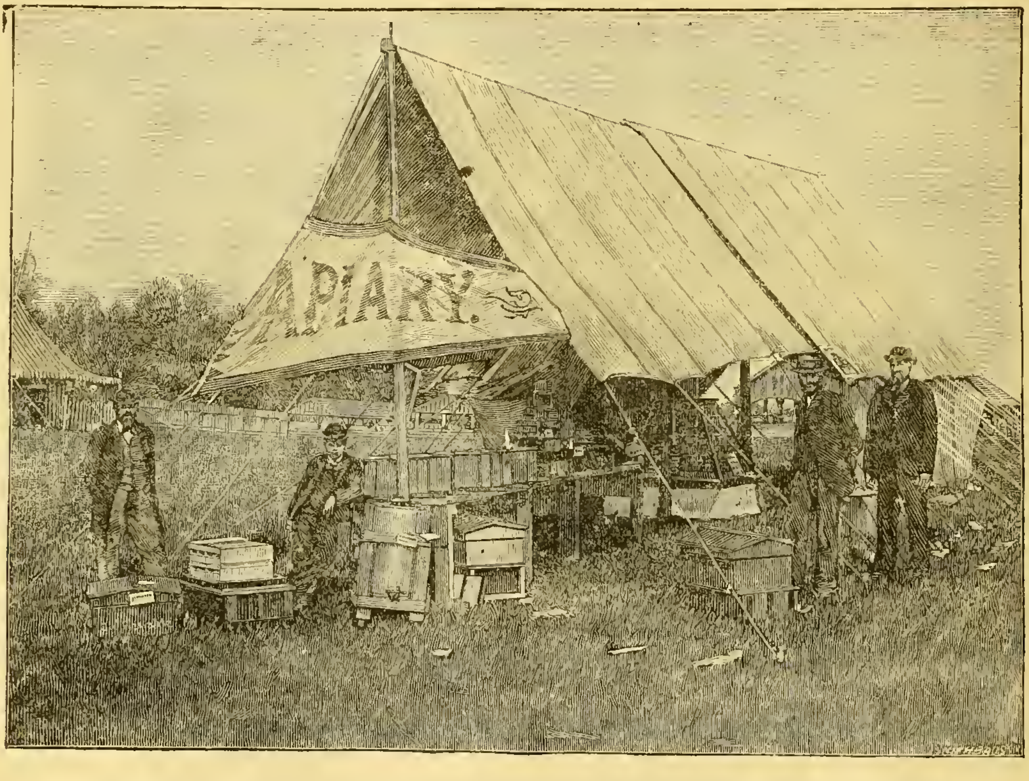
> The Weekly BEE JOURNAL is regularly received, and abounds in matter both interesting and valuable to every bee-keeper. After being laid aside from the use of my pen for almost two years, I am able again to take interest in bee matters, and hope to send you an article shortly. I am trying to induce a neighbor to send you a correspondence between himself and one of the glucose manufacturers. He wrote for terms of grape sugar for feeding bees this last spring, and the glucose was sent instead, as a good thing to mix with honey! With sincere thanks for your many acts of kindness, I remain, as ever, very truly your friend. L. L. LANGSTROTH.
>
> Oxford, Ohio, June 28, 1883.

The whole apicultural world will be glad to learn that this veteran is again able to use his pen, and will read his articles with the greatest avidity. We do not think he intended his private note to us, for the public eye, but knowing how great is the desire still to hear from our common friend, we take the liberty of publishing it. If strength of mind and body are still retained, our readers will doubtless hear from him as opportunities may present themselves.

New Music.—We have received two new pieces of music from the author, Mr. W. Chitty, St. Johns' School, Pewsy, Wilts, England. They are new and popular Marches, and very pretty. Mr. Chitty is one of our English subscribers, and is very enthusiastic on bee matters. He will send these Marches, to any address for 25 cents each.

Honey and Bee Shows.

The season for these shows is approaching, and, as they do more in educating the people concerning the uses of honey and its consumption than almost anything else, we hope that bee-keepers throughout the country will take special interest in them, and make an exhibit at every Fair open to them, which will be alike creditable to them and the Fairs whose managers show a desire to foster the honey exhibits.



BEE TENT OF C. H. LAKE'S APIARIAN EXHIBIT AT BALTIMORE, MD.

Last fall, Mr. C. H. Lake made an exhibit at the Virginia State Fair that was *the great attraction*, and aided much in bringing honey and bees to the public notice. Concerning this exhibit the following from the secretary of the Fair will speak for itself:

> I cannot avoid thanking you for the extremely interesting exhibit you made of bees and everything relating thereto, which I believe has done more to excite interest in and to cause an appreciation of that department of produce and industry among our people, than all presentations and exhibitions heretofore made at our fairs.
>
> GEO. W. MAYO, *Sec.*,
> *Virginia State Agricultural Society.*

This bee tent is shown by the engraving on this page, a photograph of which was sent to this office by Mr. Lake last fall, and is now in our office album. The first person shown on the right is Mr. Lake, the manager of the apiary, the others being some friend and assistants.

In this tent he had a large display of bees and hives, as well as a quantity of honey, both comb and extracted. A correspondent remarks as follows concerning this exhibit: "He took the premium on a lot of button-bush honey that was the whitest I ever saw. He also showed the three races of bees, and one imported Italian queen that breeds bees with the white bands like the so-called albinos; so it showed that the albinos are not an American race."

Mr. W. A. Hammond and Mr. J. W. Porter also exhibited honey and bees. It was generally admitted that the interest shown in the apiarian exhibits was very great, and that the exhibits themselves were far ahead of any that had ever before been made there.

This shows what can be done at every Fair in the country if the bee-keepers will make the necessary exhibits.

In order to show how the daily papers view these exhibits, we will append two extracts from the Richmond dailies of last November. They are as follows:

> The exhibit of the Sunny Side Apiary, of Baltimore, deserves more than what the newspapers have said about it. Mr. C. H. Lake is the manager, and was very busy yesterday showing the workings of his new hives, which are considered by bee-keepers to be the best made. Mr. Lake exhibited Cyprian, Holy Land or Syrian, and the two species of Italian bees. From one colony 220 pounds of honey was obtained in six weeks.—*Daily Whig.*

> One of the attractions at the Fair is the exhibition of Mr. Charles H. Lake, manager of the Sunny Side Apiary at Baltimore, Md. This gentleman has a large tent, under which he shows a case of over two hundred pounds of honey made from one hive; has several colonies of Italian bees, one of Cyprian bees, and also other foreign bees. Every appliance used in this business is shown by Mr. Lake. He is running seven hundred hives this season.—*Daily Dispatch.*

While on this subject we would incidentally remark that a matter of much importance, is the making out of a good Prize List, to attract exhibitors. The smallness of such have heretofore been a great hindrance to apiculture. We are pleased to see a very marked improvement in this matter of late, and have no doubt but these evils will, in time, correct themselves, especially if bee men will call the attention of the Fair managers to the matter.

The exhibition to be held at Toronto, Ontario, from Sept. 11 to 23, 1883, will be an important one for Canadian bee-keepers, and the directors have issued the following Prize List for Honey and Apiarian Supplies, open to all bee-keepers:

	1st.	2nd.	3d.
Largest and best display of extracted honey	$10	$5	$3
Largest and best display comb honey,	10	5	3
Largest and best assortment of different kinds of extracted honey, not less than 2 lbs. of each variety	5	3	2
Best assortment of comb honey in sections, not less than 20 lbs	3	2	1
Best style and shape of section, or sections of comb honey	3	2	—
Best beeswax, not less than 10 lbs	3	2	—
Best mode of marketing extracted honey	3	2	—
Best mode of marketing comb honey	3	2	—
Best comb foundation for brood chamber	3	2	—
Best comb foundation for section or honey boxes	3	2	—
Best and most scientific mode of wintering out-doors in any kind of hive.	3	2	—
Best house for wintering bees, and of most use for apiarian purposes in summer—working model to be on ground, represented by a scale of not less than one inch to the foot	3	2	—
Best mode of securing the largest yield of box honey from a single hive	3	2	—
Best mode of securing the largest yield of extracted honey from a single hive	3	2	—
Best form of Hive	3	2	—
Best winter and summer hive	3	2	—
Best stand to place under hives for ordinary use	2	1	—
Best wax extractor	3	2	—
Best honey extractor for general use.	3	2	—
Best style or comb-basket for extracting from pieces of comb	2	1	—
Best arrangements for uncapping	2	1	—
Best bee smoker	2	1	—
Best honey knife	2	1	—
Best bee tents	2	1	—
Best bee veil	2	1	—
Best hat where the veil is not used	2	1	—
Best queen nursery	3	2	—
Best labels for extracted honey	3	2	—
Best labels for comb honey	3	2	—
Best style and assortment of tin for holding extracted honey	Bronze Md'l		
Best section frame for body of hive	2	1	—
Best section crate for top story and system of manipulating	2	1	—
Best system of manipulating section in section frames	2	1	—
Best machinery for nailing frames	3	2	—
Best exhibit of curiosities	3	2	—
Best collection of honey plants	3	2	—
Best system of transferring, illustrated	3	2	—
Best and largest display of apiarian supplies	10	5	—
Best and most practical and new invention for the apiarist	3	2	—
Best exhibit of bees and new races of bees	5	3	—

Open only to Bee-Keepers who have not had over 25 colonies during the season of 1883.

	1st.	2nd.	3d.
Best 10 lbs. of clover honey (extracted)	$2	$1	$50
Best 10 pounes of basswood honey (extracted)	2	1	50
Best 10 lbs. of Canadian thistle honey (extracted)	2	1	50
Best 10 lbs. of golden rod honey (extracted)	2	1	50
Best 10 pounds of boneset honey (extracted)	2	1	50
Best 10 lbs. of Aster Honey (extracted)	2	1	50
Best 10 lbs. of any other fall-flower honey (extracted)	2	1	50
Best 10 lbs. of comb honey in sections.	2	1	50

The Canadian *Farmer* remarks as follows concerning the National Convention to be held there at the same time: "The Annual Convention of the Bee-Keepers' Association of America, will be held at Toronto during the second week of this Exhibition, at which bee-keepers from all parts of Canada and the United States will be present. This show and the convention, with the lectures to be delivered in connection therewith, will be of special interest to all engaged in this now important industry." Those who can, should make arrangements to attend both the Convention and Bee and Honey Show.

LATER.—Just as the JOURNAL is ready for the press, we have received a few lines from President D. A. Jones saying that the Convention will be held on Sept. 18, 19 and 20, 1883, at Toronto. Further particulars hereafter.

The Glenwood Apiary.—We have received from Mr. W. H. Shirley a nice view of his apiary at Glenwood, Mich., and have placed it in our office album. Mr. Shirley describes it as follows:

By this mail I send you a small picture of your humble servant, and part of my apiary, as it looked, June 16, 1883. The small building in the centre of the apiary is a house fixed to take colonies in, to handle, in time of robbing. I also use it for taking off honey in the fall (getting the bees out of it). The larger building shown is the house apiary Mr. Heddon built and kept bees in two years, I believe. I use it as a work shop, supply room, etc. The picture shows about four-fifths of my bees. Perhaps you will think it worthy of a place in your museum. White clover is yielding first rate here now. W. H. S.

Care of Comb Honey.—Relative to this important matter, the Indiana *Farmer* gives these timely hints:

If you have not got the time to sort out the sections and brush off the bees, set the sections or boxes in a clean barrel or box, and spread a white cloth over the top. The bees will leave the honey and crawl up to the cloth. Turn it over at intervals and let the bees out. Keep the honey removed in a warm place, and keep a lookout for worms. If the honey shows signs of being worked, fumigate the infected sections with sulphur. Too much will turn the combs green.

"The Poulterer's Guide, for treating diseases of poultry, with symptoms and remedies for their treatment," is the title of a new pamphlet of 24 pages, by C. J. Ward, editor of the *Poultry Journal*, Chicago, Ill. This is very valuable for those who keep poultry, and the small price at which it is published (15 cents), as well as the name of its author, will cause it to have a large sale. It covers all the diseases in poultry, and prescribes reliable remedies. We can furnish it to those who may desire it.

A Swarm of Bees.

B hopeful, B cheerful, B happy, B kind,
B busy of Body, B modest of mind,
B earnest, B truthful, B firm and B fair,
Of all Miss B Havior B sure and B ware.
B think ere you stumble of what may B fall;
B truthful to yourself and B faithful to all.
B brave to B ware of the sins that B set;
B sure that no sin will another B get.
B watchful, B ready, B open, B frank,
B manly to all men whate'er their rank.
B just and B generous, B honest, B wise,
B mindful of time, and B certain it flies.
B prudent, B liberal, of order be fond,
B uy less than you need B fore Buying B yond,
B careful, But yet B the first to B stow,
B temperate, B steadfast—to anger B slow,
B thoughtful, B thankful, whate'er may B tide,
B justful, B joyful, B cleanly B side,
B pleasant, B patient, B fervent to all,
B best if you can, But B humble withal,
B prompt and B dutiful, still be polite;
B reverent, B quiet, B sure and B right;
B calm, B retiring, B ne'er led astray,
B grateful, B cautious of those who B tray,
B tender, B loving, B good and B nign—
B loved shalt thou B, and all else B thine.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., July 2, 1883.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The nominal price of extracted is 7c. for dark and 9c. for light—here. The supply is abundant and sales are slow.

BEESWAX—None in the market.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY.—The market for extracted honey is lively, and the demand exceeds the arrivals. Our stock is small and we are in danger of having sold out every day. We pay 7@10c. for good honey on arrival, the latter price for choice clover. There is a small demand for comb honey, and prices nominal.

BEESWAX.—Arrivals of beeswax are plentiful. We pay 35c. for a good article on arrival.

CHAS. F. MUTH.

Quotations of Commission Merchants.

NEW YORK.

HONEY.—Best clover in 1-lb. sections (no glass) 22@23c.; in 2-lb. sections (glassed) 18@20c. Fair quality, 1 and 2-lb. sections, 17@18c Extracted, white, in small barrels, 10@11½c.; buckwheat, 8@9c.

BEESWAX.—Is more plentiful. Prime yellow sells at 37½@38½c.

H. K. & F. B. THURBER & CO.

CHICAGO.

HONEY.—The demand for extracted is good, and the market bare of all unfermented honey. Prices range from 8c. to 10c. Comb remains lifeless and will until the new crop comes, or until August. Sales of comb are being made at 8c. to 15c.

BEESWAX—35@36c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY.—Nearly 300 cases new, mostly extracted, arrived per Southern steamer on Monday, June 15. Sales of part of the same in a wholesale way were made at 6c. Retail transfers were made at a little higher figure. Quotations for comb are nominal. There is a little choice new comb offering, but no sales reported. One buyer offered 12½c. for six cases, but insisted on being allowed about 3 lbs. extra tare. White comb, new crop, 12½@15c. Extracted, choice new, 6@7½c.

BEESWAX—Wholesale, 27@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY.—Very little call. Occasionally barrels of strained and extracted sold at 6¼c to 7½, but nothing worthy of mention done in comb. New quotable at 14c, and old nominally less.

BEESWAX.—Easier, at 32@33c.—one lot sold at 33½c. W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY.—There is a moderate sale for best white 1-lb. sections at 18c, occasionally 19c, but 2 lbs. are not called for. Extracted has no sale at all.

BEESWAX—Not offering.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—Our supply is gone; we have none to quote.

CROCKER & BLAKE, 57 Chatham Street.

CORRESPONDENCE

For the American Bee Journal.

Drones with First Swarms.

G. M. DOOLITTLE.

As spring arrives, and the hive becomes populous with bees, their instinct leads them to obey the divine command, "to multiply and replenish the earth." To this end they commence preparations for swarming, the first of which is the depositing of drone eggs in the drone cells by the queen.

Soon after this, the embryo queen cells are started, and if the secretion of nectar is good, the queen deposits eggs in these as soon as the population is sufficiently increased to warrant a division of their numbers. The eggs are not usually deposited in the queen-cells till the drones are hatched quite plentifully. When the time comes for swarming, which is as a rule when the first queen cell is capped, the bees rush out *en masse*, including the old queen, and one-eighth or more of the drones. Many seem to suppose that no drones go with the first swarm having the old queen, claiming it is unnecessary, and for this reason it is said that "the drones remain in the hive to fertilize the young queens."

As there is plenty of drones hatching at this time, there is no need of all of them remaining, which are hatched, as it will still be seven days before the first young queen leaves her cell, and then from 5 to 8 days before she takes her "wedding flight;" making 12 to 15 days, during which time one-half of the drones which were in the cells at the time the swarm issued will have hatched. I am well aware that a far greater number of drones go with a swarm having an unfertile queen than with a swarm having an old fertile one, for a greater necessity for them exists; still, the old queen is always liable to accident, which might occur soon after a few eggs were deposited in the worker cells, being built by the bees; in such a case they could rear a queen, but no drones; hence, if none went with them, their young queen would prove of no value. Nature is very provident in all her ways, and the instinct of the bees leads them to prepare for any case of emergency.

We would conclude that where there were plenty of drones in neighboring hives, that there was no need of every swarm having drones, but the bee uses no reason, and thus rears as many drones in a yard containing 500 hives, as if the hive were isolated 100 miles from any other. I have had two swarms this season, and, although, few drones have been reared this year on account of cold and wet weather, still each swarm contained a score or more of drones.

Borodino, N. Y.

Prairie Farmer.

Apiary Talks—Hoarded Honey.

MRS. L. HARRISON.

Millions of heads of white clover and millions of drops of rain. A large amount of honey has been secreted and stored during the few hours of sunshine intervening between showers. Hives are overflowing with bees, honey and brood; just the exact condition for storing surplus, should the weather be favorable. The wet weather will prolong the bloom, if it does have to "waste its sweetness on the desert air," and insure good fall pasturage. Whenever the sun shines out hot, a vigilant eye should be kept on the apiary, lest the bees swarm and decamp for the woods. Bees mean business when they swarm, and will not wait for hives to be made, or to go to town and buy.

Old hives that are to be used should be thoroughly cleansed, and free from offensive odors. Bees become very warm during the excitement of swarming, and if put into a close hot hive, and left in the sun, will invariably seek more comfortable quarters. We once had a very large colony desert the hive the day after swarming, and leave for the woods, because the sun was shining very hot upon them, and they were crowded, we having neglected to put on surplus boxes. As a rule, with few if any exceptions, bees cluster before leaving. If they have issued and returned to the same hive again several times, they may take a final departure without clustering; or if they dislike their hive they will take wing and leave. Bees that have been clustered for days, on the outside of their hives, are more apt to leave then others. They should be kept at work, and not allowed to lie idle and study up mischief. Plenty of room should be provided inside of the hive for them to cluster in, and if a sudden flow of honey occurs, it will be improved.

Our surplus boxes are made by fastening, seven "prize boxes" together with little strips of wood, and glazing the ends. Three of these cover an eight-frame Langstroth hive. In removing some filled boxes from the hive lately, the thought occurred to me to try the late Adam Grimm's plan of getting the bees out. We have a little hive in which we have an imported queen. It has two frames about 4 inches square. We put a newly hatched queen into it, and set it into a large box, and then placed the honey boxes alongside of it, and covered it up to prevent robbing. The old bees returned to their hive through a knot-hole in the box, and the young ones crawled into the small hive with the young queen. When the bees were all out of the surplus boxes the little hive was full of young bees, and were a regular organized colony, and put on airs like one. In this way no young bees were lost, as is sometimes the case.

When a swarm issues it goes forth with haversacks loaded, carrying three days' rations. If from any cause the honey flow is interrupted, either by long continued wet weather or drouth, the colony must perish, as it has no old stores to resort to in an emergency. Bees, as a rule, or with a few exceptions, never desert uncapped brood, and many apiarists practice giving all new swarms a frame, so that they will remain. If, from any mishap, they lose their queen, they have the means at hand to raise another. This frame also contains honey, which is some help to the bee family just commencing housekeeping. If a frame of honey is also given them, their preservation will be insured.

Peoria, Ill.

For the American Bee Journal.

Cost of Changing Frames and Hives.

W. H. STEWART.

Several writers for the BEE JOURNAL seem intent on having bee-keepers, throughout the land, all adopt the same comb frame. This means the use of the same hive. The use of the same frame and hive means throwing away all other hives and frames now in use, and the destruction of many nice combs, except the one kind that is to be adopted. Every sensible bee-keeper knows that such a move, if carried out, would result in the sacrifice of at least one-half of all the property now invested in the bee business.

Not only the discarded hives, frames and combs would be lost, but extractors made for the use of the American or the Gallup frame would be of no use for the Langstroth, and that made for the Langstroth would be of no use for the others. All the wide frames for holding sections on the American and Gallup, also those made to use crosswise of the Langstroth, above and below, would become kindling-wood if none but the long Langstroth is to be adopted.

To me it would appear just as reasonable to require that all bee-keepers should look alike in the face, weigh the same number of pounds and ounces, wear the same size of boots, and to have the same climate and other surroundings, as to require that all should adopt the same hive, frame and extractor. It is a well-known fact that men differ just as widely in opinion as in appearance, size and shape.

Natural law so dictates that men ever have, and ever will, not only differ in opinion as much as in appearance, but that men as nearly alike mentally and physically as they could possibly be matched, if placed in different climates and having different surroundings, would behave widely different. Men are creatures of habit and influence. Men that have become accustomed to chop with a single-bladed ax are slow to learn to use one with a double bit. Men that have learned to use the right-handed plow would feel very awkward in attempting to use one that turned the land in the opposite direction. Men that have practiced the use of the American frame and hive, would have to learn many new motions and manœuvers to become experts with the Langstroth or Quinby frame.

Again, those that have learned to give their bees the best advantages in both summer and winter with one shaped hive, would have to experiment for years before they would be able to do the same with another hive and frame, differing so widely as do the Gallup and Quinby.

And yet again, men are seldom willing to sacrifice all the stock that they have carefully invested in a business. Even if an economical bee-keeper should become satisfied that he could do somewhat better with a different hive if he has a hundred or more colonies in hives that work reasonably well, he will not hurry himself to make an entire change. Another objection to this proposed constitutional amendment is, that many bee-keepers choose to winter part or all their bees on the summer stands; and in this locality that way of wintering, and the use of the Langstroth hive and frame, would mean the loss of the bees. Even the chaff hive, with the Langstroth frame is a failure as an out-door winter hive in this part of the Northwest.

And yet again, many experienced, careful and thorough bee-keepers find practical advantages in the use of one form of frame and hive that they fail to find in the use of any other, and they would not consent to forego those advantages on any consideration.

Please let me ask those who are advocating the adoption of the Langstroth frame as the standard, suppose it were put to vote, as to what frame we should all adopt, and a majority should cast their vote for the American frame, would you forego your choice, discard the Langstroth and adopt the American? Tell us, please, how you feel about that part of the universal suffrage business.

Orion, Wis.

Haldimand, Ont., Convention.

The Haldimand Bee-Keepers' Association met at Cheapside on June 16, pursuant to adjournment. Members present: E. DeCew, President; Messrs. Jas. Armstrong, Robt. Buckley, William Jack, William Kindree, Andrew Vanderburg, A. Gloyd, Henry Smith, F. Mehlenbacher, E. Gee, D. Byers, Mansel McCollom, Wm. Harrison, R. W. Beam, Robt. Anguish, D. Rose, Dr. Harrison, Jas. Caldwell, and E. C. Campbell.

The minutes of previous meeting were read and adopted.

The first questions discussed were: "How to successfully winter bees, and to prevent spring dwindling." The president gave his experience; he had 15 colonies in the winter, and had lost them all. He attributed his loss to two causes—extracting too late, and not feeding enough back, and spring dwindling. He packed his bees in straw.

Mr. Smith packed his bees in chaff, and did not lose any.

Mr. Jack fed some of his colonies in the fall, and packed them in dry sawdust, and brought them through all right. Those not packed died during the winter.

Mr. Armstrong thought that with proper protection, plenty of stores, and young bees, there would be little or no loss in winter. He packed his bees in sawdust, and left them in the packing until about the 10th of May, and lost only 4, one of which was queenless.

Mr. Vanderburg wintered his bees in double-walled hives, well packed, and gave them plenty of stores so as to keep up late breeding, and brought them through successfully. He did not lose any.

Mr. Buckley thought the great secret of wintering successfully was in having plenty of young bees. He put 38 colonies in the cellar in the fall, took out 33 in the spring, had lost all but 8 in April and May, by spring dwindling.

The secretary gave his plan of wintering, and an account of a visit to the apiaries of D. A. Jones, of Beeton, his method of wintering, and how to prevent spring dwindling. Mr. Jones uses a bee-house with walls two feet thick, packed with sawdust and ventilated by pipes running under ground. His plan of preventing spring dwindling is to leave the bees in the bee-house until there was plenty of pollen for the bees to work on, and closing the hives on cold or windy days after being set out.

Messrs. Gloyd, Kindree, Byers and Beam gave their views, mainly the same as given by others.

Dr. Harrison gave an amusing account of his first attempt at wintering bees. He bought 2 colonies at Holterman's sale late in October, and when he and Mrs. Harrison examined them, a few days afterwards, found that they had not half a pound of honey between them. He carried them into the house, put them into an empty room, darkened the windows, and fed them, all winter, with a thin syrup, by means of an inverted fruit jar. On warm days, he opened the window so that they could have a fly, and they came through all right, and he has them yet.

Mr. Rose, an old bee-keeper, gave his experience in wintering bees in different ways, and succeeded best with the old box hive.

Which are the best race of bees? Mr. Kindree thought hybrids were better honey gatherers than either blacks or Italians.

Mr. Buckley thought there was as much difference between Italians and blacks as there is between thoroughbred and grade cattle. The Italians were far ahead of the blacks, and gave instances in proof of his view.

Mr. Armstrong also liked the Italians, and thought they were superior in many respects.

Mr. Rose liked the Italians because they were so gentle and easy to handle, but did not know whether they were better workers or not.

The secretary spoke in favor of the Holy Land bees, saying they were splendid workers, and not half so cross as they got credit for.

The following resolutions were passed:

Resolved, That application be made to the various agricultural societies for space and prizes on honey and apiarian supplies, at the fall shows.

Resolved, That the next meeting of the Association be held on Saturday, 22d of September, at Cayuga, at 1 o'clock. E. C. CAMPBELL, *Sec.*

Frankford Herald.

Preparing for Emergencies.

JOHN SHALLCROSS.

The young bee-keeper has, no doubt, learned by this time that there is a wide difference between theory and practice. That while the one is important and instructive, the other is full of value, as a means to success. An occasional mishap keeps the beginner upon the alert, and teaches him to make the best use of his resources.

He has expected abundant stores in his section boxes, while the bees have insisted upon filling the brood combs. He has tried to Italianize his colonies, but his most expensive queens have been rejected and destroyed. He has intended to prevent natural swarming, but the perverse insects have taken wing in spite of him. Other disappointments hedge up his way until, in his discouragement, he concludes that bee-keeping is not all romance. It is a wise and wholesome instructor. It is to the amateur the beginning of wisdom. It sets him thinking. He begins to ask questions, and to read up on the subjects of his failure. He realizes the cause of his mistakes, and learns how to prevent a recurrence of them. He begins to believe he is traveling a safer path, and knowledge comes in proportion to his faith. It is probably the case, while expecting much, he has prepared for nothing. New hives were needed for the increase of his stock when none were ready. The boom of the honey harvest came when no section boxes were prepared, and the manufacturers were too busy to fill an order without great delay. Frames were needed for newly captured swarms, but had been forgotten until too late. When foundation, would have been most advantagnous to the busy workers, none had been secured.

He writes in his note book "too slow; bees, like time and tide, will not wait." Forewarned, he determines to be forearmed; there is great hope for him now. The result of his thinking will be that he must be always systematically ready.

For every colony that a young bee-keeper has he will require at least three fully equipped extra hives ready for use at a moment's notice. Thus, no contingency of swarming, dividing or creating nuclei will catch him unawares. He should have a light box or basket of proper dimensions, to take swarms from the branches upon which they may cluster. He should have a good smoker to subdue obstinate colonies. Also, an overplus of broad frames and section boxes with separators and starters, in case of unexpected yields of honey. He should be properly supplied with both brood foundation and thin white foundation for starters in sections. He will also need a box of apiarian tools containing hatchet, hammer, chisel, cutting nippers, pliers, two or three sizes of awls, small saw, strong pocket knife, some eight-penny finishing nails, small wire nails of three or four sizes, the largest, say three-quarters of an inch; some twine, and such other things as, in the course of practice, will be gathered together.

Thus equipped, with everything in its place, he will be prepared for any emergency. The first experience will teach him, if watchful, how, where and from what, honey is gathered. He will soon learn to distinguish, both by appearance and taste, that which is gathered from early fruit blossoms, white clover, linden, later flowers or buckwheat. With this knowledge, the second season will show the value of an extractor, by which honey can be taken as it is gathered, and each kind and quality can be kept separately. He will gradually learn that bee-keeping is not play, nor, upon a moderate scale, is it labor. It can be pleasure or profitable recreation, but it requires readiness, system and vigilance—excellent qualities even for persons who are not bee-keepers.

Philadelphia, Pa.

For the American Bee Journal.

Preparing for Winter.

L. R. JACKSON.

Successful wintering of bees, in the North, is one of the most important subjects with bee-keepers. This, I think, is any easy thing to do, if we commence in time to prepare for the coming winter. I have always commenced in June to prepare for winter, and have always been successful in my 8 years experience, having never been troubled with "spring dwindling" but one year, and that was when I fed the bees with rye flour early in the spring.

Honey contains sugar in two forms: Cane sugar and grape sugar. Clover honey contains more cane sugar than fall honey, and is more easily and more thoroughly digested than grape sugar, or fall honey, and should be used for winter stores.

Our bees now have honey enough to winter them, with all the increase we shall have, and, as soon as it is well ripened, we will put away 2,000 pounds for winter. Then we can take honey with no fear of our bees starving next winter.

I have never known as good a prospect for a large crop of honey as we have this year, or known bees in a better condition for gathering it than they are now. Nearly all our bees are working on 20 Langstroth frames, and are crowding the queen, in spite of all we can do, unless we extract the honey before it is ripe, which it will not pay to do.

We have rain about three days in the week, yet it does not seem to stop the flow of honey as it usually does. I had prepared to run the bees for increase until I saw what the harvest was going to be, when I changed my plans, and it has crowded me with work, so that I have had to hire extra help, and work from 4 a. m. until 8 p. m. to keep up with the bees.

I have given a few hints for wintering, which can be understood by any who wish to profit by them, and in September I will give my plans for packing.

Urmeyville, Ind., June 11, 1883.

[By an accident, after the type of last week's paper was "on the press," a part of the above article was "smashed," and could not be read; we therefore give it another insertion, so that those, in whose papers it could not be read last week, now have it with that "smash up" restored.—Ed.]

Planter's Journal.

Extracted vs. Comb Honey.

O. M. BLANTON.

In almost every bee-keepers' association the question arises: "Which is the most profitable, extracted or comb honey?" Beyond a doubt, in my mind, extracted honey, especially in the South where the honey in the latter part of the season is dark and of a strong flavor.

1. The yield is from two to three times as much, and the same comb can be used again and again for the bees to fill, thereby enabling them to gather honey and lose but little time in the secretion of wax to build comb, as only a little is required for repairing and capping it.

2. Swarming is more easily controlled, as you can extract the honey from all the combs if necessary, which conduces more to keep the bees to their work than anything else.

3. The frames and apparatus required for extracted honey are more simple, and admit of more ease and rapidity of manipulation, thereby enabling the bee-keeper to handle and manage almost twice as many colonies.

4. The apparatus is far less expensive, as you are able to dispense with honey-boards, glassed section boxes and frames; the latter you lose in shipping.

5. The loss of comb foundation and comb, which is invaluable, especially when you are aware that the combs can be filled often, as much as fifty times before they are too old for the bees to use.

6. You can make more early shipments of extracted honey. In fact, I often begin to extract by the 1st of April, and have never taken off comb honey before the month of June, and but little until July.

7. Packages for extracted honey cost far less, as you can put it in barrels of 45 to 50 gallons, that do not cost more than $2; where comb honey requires cases nicely finished with glass, and demand great care in packing and handling in transit to market. In addition the freight charges are so much less for barrels.

Bees are loth to work in small section frames, and often when they have partly finished capping the combs in the section boxes, the large frames in the brood-chamber are filled so much with honey that the queen has no place to lay, and the bees must swarm. If you extract from the brood-chamber, the chances are that the bees will fill the cells with honey before they commence work again in the sections.

There is this objection raised to extracting, that there is too much pollen left in the cells to become old and unfit for food. Such is necessarily the result of working for honey instead of great increase of swarms. Any thoughtful apiculturist will always reserve a certain number of colonies for increase.

As to the objection that colonies are robbed so close in extracting, that the bees are left without honey to winter on is too ridiculous, as none but he who is careless will fail to provide sufficient honey for the winter, and see that it is placed in the brood-chamber. No bee-keeper should fail to handle and closely inspect the combs in the brood-chamber.

Those who advocate comb honey for profit, in the South, have a poor conception of progressive and profitable bee-keeping. Comb honey is a fancy article that fluctuates greatly in price (from 10 to 25 cents), whilst the extracted is a staple article of commerce, and brings promptly in the market from 7 to 10 cents per pound.

For profit, extracted honey far surpasses that in the comb, and a bee-keeper who understands his business, and extracts as rapidly as it is gathered by the industrious insects, is on a fair road to fortune, especially if he uses the 20 *frame one-story Langstroth hive*.

Greenville, Miss.

For the American Bee Journal.

Florida for Honey Production.

W. S. HART.

Within the past two years there has developed a great interest among Northern bee-keepers in regard to Florida as a honey-producing State. Having had considerable to do with exciting that interest, by writing up our apiarian resources for Northern papers, a large portion of those who visit the State either write to me or call upon me, and I find that the impression seems to prevail that my immediate neighborhood is the best and almost the only honey-producing section of this State. The consequence is, that bee-keepers are crowding in here to such an extent, that I honestly believe that unless there is a check put to it, the pasturage will be over-stocked within twelve months so as to greatly reduce the profits of the business. So far as my interests go, I am glad to see the country fill up with bee-keepers, or any other good citizens, and I have labored for years to accomplish that object, but, to the man whose only income is from his apiary, this is a matter of serious consideration.

I know it has been claimed that it was almost impossible to over-stock this "Bee Belt," as it has been called, and as it has been stated to extend from Port Orange on the Halifax river, 125 miles south to Oak Hill on Mosquito Lagoon, it certainly does seem as though there was room for a good many yet. But instead of 125 miles, the section spoken of is really but about 18 or 19 miles. Then comes a break in the black mangrove, of some miles, and the next good location for an apiary, with a view to the mangrove pasturage, is some distance down the Indian river. That the black mangrove is our best honey-producing tree, is beyond a doubt, but that there are plenty of locations in the State, far away from any mangrove, in which bee-keeping can be made more profitable than it usually is in the North, is also beyond a doubt, in my mind at least.

Until all the coast and Salt River of south Florida, where the black mangrove grows, is taken up and occupied by practical apiarists, I would recommend that section, but as I find the black mangrove sections are more limited then I formerly supposed, I will say a word for other pasturage.

Our hammock lands are rich loamy spots of from one to several thousand acres each, scattered about over the State. This land is covered by a heavy growth of cabbage palmetto, basswood, hickory, oaks, prickly ash, necked wood, youpon, white maple, bays, etc., etc., all of which have a greater or less value as honey producers. These hammocks are surrounded by pine woods or savannahs. In the former are to be found the saw palmetto, gallberry and other good honey-producers, and in the savannahs are the willows, for early pasturage, and later, a perfect sea of wild sunflower, for a late crop, besides innumerable small flowers.

If with all these resources to draw from, a few colonies of bees cannot do well, when properly cared for, near almost any of these hammocks, I am certainly greatly mistaken, but if that were the case, then, with our climate exempting us from all wintering troubles, and giving us nearly the whole year to work our bees in, with cheap living, cheap transportation, and other advantages too numerous to mention, I see no reason why a person cannot locate in the pine woods in sections where there is naturally but very little honey produced, and there plant just what he wants his honey from, in such a way as to give a continuous flow nearly the whole of the year. I believe this will be done before many years, for, if it will pay to plant for honey in the North, it seems to me it will pay better here. I am now trying sweet clover, Simpson honey plant, and spider plant; the seeds of which were kindly sent to me by a gentleman in Cincinnati.

Now, in reference to C. H. Lake's article in the BEE JOURNAL, April 25, page 213, I will say, as he got his information from correspondence alone, he has naturally fallen into some errors which, as I feel sure that Mr. Lake would wish it, and as it might, as it stands, mislead parties coming to this State, I take the liberty of correcting and commenting upon as follows:

1. The length of the "Bee Belt" is some 18 or 19 miles instead of 125.

2. There is quite a tract of black mangrove at Indian River narrows, and more or less all along the river, although in many places the red mangrove predominates. On many portions of the river the black variety is too scarce to be of much value for honey.

3. Mr. Olson is quoted as saying it is "impossible to over-stock the country." Now, if *the country* means the "Bee Belt," there certainly must be a mistake some where, for this section of Florida *can be very easily over-stocked*, and Mr. Olson knows it, and, being a strictly honest man, he would not intentionally make any statement that would convey the idea that the above quotation does, or at any rate, not since he got well posted as to the resources of this country. While the mangrove is in bloom, it seems almost impossible to get bees enough to gather it all, but bring enough bees here to gather one-half of it, and bee-keeping would be reduced to a poorly paying business. Much less then "90 per cent." of our season's crop is mangrove honey.

4. The cabbage palmetto produced much less honey last season then usual, but considerable pollen was gathered from it. This may have something to do with the diversity of opinion in regard to its value.

5. Our prospects for first-class transportation by the middle of summer, is now very good. A railroad and the coast canal are both within a short distance of the Halifax river, and will soon be through to it.

6. Messrs. Alderman and Roberts, of Wewahitchka, Fla., have reported 350 colonies, which, I think, must be the largest apiary in the State.

7. Mr. Chas. F. Muth has praised our honey without stint, and has gone to great pains to put it before the public. In reply to a note and some samples of our honey sent by him to Rev. L. L. Langstroth, the latter wrote as follows:

> OXFORD, Nov. 16, 1882.
>
> FRIEND MUTH:—I have delayed giving you my opinion of that Florida palmetto honey until I could get the verdict of others besides myself as to its merits. Its color is unexceptionable, and its flavor very pleasant. I am not sure but that the majority of consumers will consider it equal, if not superior to white clover honey. Our Southern friends are to be congratulated on being able to supply our market with such a choice article.
>
> L. L. LANGSTROTH.

Any one that would ask for a better endorsement than that, would be altogether too particular. It will sell my honey in any market of the world at top prices. I feel that the thanks of all Florida bee-keepers are due Mr. Muth for his kindly interest and efforts on our behalf, as by them our honey now has a market proportionate to its quality, while formerly commission houses would take advantage of the old phrase, and when honey was quoted 11 and 12 cents per pound, they would make returns thus: "Gallons Southern strained honey at 80 or 85 cts. per gallon;" and this in spite of all we might say about "quality" or "extracting."

8. If Mr. Olson stated in his letter to Mr. Lake that he "made 6 swarms from one colony this season, and took from the old colony 440 pounds of extracted honey," he certainly wrote what he did not intend to. He meant to have said that he took 440 pounds from the old colony and its increase. Now, as I know Mr. Olson to be an upright and honorable man, and I believe Mr. Lake to be the same, and that only good was meant by his letter, I want it understood that the foregoing is not intended to reflect on the honesty of either party in the least, but that the discrepancies arise through Mr. Lake's not getting the exact ideas intended by the writers, or some carelessness on the part of the writer, perhaps. Such misunderstandings are very common. Mr. Lake's letter is interesting, and I can endorse all it says, with the exception of the above mentioned errors, which only serve to bring out more facts. There is still plenty of room for practical bee-keepers in this State, if they will only look up the locations.

New Smyrna, Fla., May 14, 1883.

Read before the Texas Convention.

Enemies to Honey Bees in Texas.

B. F. CARROLL.

In choosing the above for a subject, it was in hopes that I might bring something before you that would be of interest to the bee-keepers of our noble Lone Star State, and I will, mostly, confine myself to what I have seen in my apiary since I began the cultivation of the honey-bee, on modern principles, in 1869; at which time I was using the old "log and box gum."

My first notice was the destruction of several colonies by the moth. It was my custom to knock off the tops of the log or box gums and cut the honey out until I reached the brood nest, and often the honey would run out at the bottom, and as anything sweet will draw the moths, in large numbers, they would flock around the hives about nightfall, and find plenty of bits of comb cut down by the bees in which to deposit their eggs, which would so demoralize the colony that they invariably fell a prey to the ravages of this insect.

I luckily saw the advertisement of H. A. King & Bro., of Nevada, Ohio, in some agricultural paper in 1868, offering hives, etc., for sale. I ordered 13 American hives, and in 1869 I had them full of bees, and but little trouble did I have from them, until I introduced the Italian, Holy Land and Cyprian bees, and especially the latter in 1880. I have not seen a single colony infested by these dirty-looking worms, and I no longer consider the bee-moth an enemy, but really an advantage, for they are rapidly driving box-hive men into our ranks or out of the business, and the little black bee, like poor "Lo," is westward going.

The next enemy to which I would call your attention, is the *Asilus Texanus* (*Misouriensis Ryley*) or the Texas bee-killer, which I find more destructive, and in larger numbers, than any bee-killer I have seen. The *Asilus Texanus* is a two-winged fly of the predacious family *Asiladæ*, and takes the bees in his long front set of legs and leisurely sucks all the juices from the bee. His legs being so long that the bee cannot get at his body while in captivity, but I have frequently seen my "Cyprians" capture, ball and kill these insects in its attempt to take a bee from the front of the hive. I find these insects more numerous in dry, hot years like 1881. That summer I killed over 100 in an hour, and every fly had a bee. They not only attack the bees about the apiary, but I have seen their nefarious work in the horsemint fields.

You will find this insect described as beneficial to the agriculturist in the "Report of the Commissioner of Agriculture for 1879, plate XI, figure 3."

There is another bee-killer, or rather a large fly that is tolerated by the bees, to hang around, not knowing that these innocent-looking creatures will let fall a tiny egg upon their body that will hatch into a devouring grub, which bores into the body of the bee, where it lives on its vitals, which it soon destroys. This fly, I think, is described by Prof. A. J. Cook, ex-president of the N. A. B. K. Association, as the *Tachina* fly, and is also described as beneficial to the agriculturist (see Report of Commissioner of Agriculture for 1879, plate XIV., figure 2). I hope this last named insect may stay in the cotton fields where it belongs, for if it should visit our apiaries, in large numbers, we would have to "hang our harps on the willow trees" and give up our lovely pursuit.

The mosquito hawk, *Libellula* (see same Agricultural Report above mentioned), is another great enemy to our pets, and last September and October were present every evening, in alarming numbers, ready for a feast on the heavily laden bees as they came in. These insects can be driven off and killed in large numbers with long switches and whips, and is fun for the juveniles. They lay their eggs in ponds of water, by a peculiar dipping motion, where the young larvæ feed on their insects.

The next enemy we will notice is the *Mantis Religioso*, or more commonly called "Devil's horse." These formidable insect eaters are of such vast advantage to our orchards and vineyards, that I am in favor that we overlook his occasional meal on our pets.

A very small bronze-colored fly, and I think it is the same fly that lays the eggs on the locust, that destroys so many of them, has made its appearance in my apiary, and I have seen it on the body of the bee, and from the antics cut by the bee, I fear it, too, is of the *Tachina* family, and that the eggs will produce grubs in the bee.

I have given you a few of the most formidable insect enemies to the honey-bee, that has come under my notice, and I will mention a few others of a different species. The English sparrow, mocking bird, and the martin of the feathered tribe I have caught eating bees, and particularly the mocking bird. I have watched these birds take a dozen bees or more before they are satisfied; they are very fond of drones, and it may be possible the largest amount of bees they eat are drones.

Toads, ants and spiders kill a few bees, but these are so easily dispersed that they can hardly be classed as enemies. I never kill a toad, but carry him to the garden where his presence is of greater importance then in the apiary.

For the destruction of the large red ants I use cyanide of potasium (poison) 5 ounces to 5 gallons of water; for small ants, salt and wood ashes.

And lastly comes the greatest enemy of all, and let us give him the dignified name of *Bonus Homo et Nobis Amicus*, his work is sure, and always leaves this epitaph behind: "Here rests, cut off from useful labor, a colony of industrious bees, basely murdered by its ignorant and ungrateful owner."

"Ah, see, where robbed and murdered in that pit,
Lies the still heaving hive! at evening snatched,
Beneath the cloud of guilt-concealing night,
And fixed o'er sulphur! while, not dreaming ill,
The happy people, in their waxen cells,
Sat tending public cares.
Sudden, the dark, oppressive steam ascends,
And, used to milder scents, the tender race,
By thousands, tumble from their honied dome
Into a gulf of blue sulphurous flame."

Killing bees for their honey was unknown in the days of Aristotle, Varro, Columella and Pliny, and must have originated in the dark ages, when the human family had lost in apiarian pursuits, as well as in other things, the skill of former ages. We are told that the old cultivators took only what their bees could spare, killing no colonies, except such as were diseased.

I am happy to see that this inhuman and cruel practice is fast giving away, and wherever bee papers and movable frame hives make their appearance, this practice ceases immediately. The spread of apistical knowledge is a sure remedy to the dreaded enemy last named. I feel proud that the Texas State Bee-Keepers' Association is doing a noble work in the advancement of apiculture in Texas; a State that is soon destined to lead all the rest of her sister States in this branch of rural economy. Patent-hive venders, that swarmed through our State a few years ago, have ceased to put in an appearance. Bee periodicals, assisted by a score of agricultural papers, have educated the people. Let the good work go on until our land and country shall flow with "milk and honey."

Dresden, Texas.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Rearing Queens.

Will Mr. Heddon please answer the following questions:

1. Can pure queens be reared from eggs layed by a hybrid mother? If not, what kind of queens would those three-banded workers have given.

2. When a queen fails, does she fail at once, or gradually? I have had queens that were good layers until, all at once, they would quit and lay no more.

3. What has been your experience with queens reared naturally or artificially—are those cells reared under the swarming influence any better than those reared artificially?

4. I have several queens which are three-fourths Italians, or more, would you advise rearing queens from these, to get the best honey gatherers?

Goshen, Ind. H. J. SCHROCK.

ANSWERS.—1. The Italian race has physiological and mental markings peculiar to itself. When crossed with another race of different traits and markings, the offspring of that crossing, by the second law of evolution, inherit variedly more or less of the characteristics of either or both races. A bee, whether a worker or queen, can possess three golden bands, and yet be a hybrid, but no bees with less than three bands, are called pure Italian. An egg laid by a hybrid queen, while it might hatch a three-banded worker, should not be expected to produce a queen or worker truer to the traits of character peculiar to that race than the egg in an adjoining cell which might produce a bee of but one band.

2. Queens usually give out, seemingly, all at once; at least so suddenly that it seems so to the bee-master.

3. I have never made any thorough and pointed experiments upon this subject, nor do I believe any other bee-keeper has. This I will say, I have gathered a feeling from observation and experience, as I have traveled up the hill of apiculture, that queens reared under the swarming impulse are better than those not so reared. I find that if I go to a colony of any kind or size, at any time, and remove the queen, they rear no such queens as the same colony will when they do it of their own accord, with the queen in the hive. The cells do not look as good. I also know that since I have been producing queens under the swarming impulse only, my

bees are much better than before. Of course I have been breeding more closely for qualities; at the same time my prejudices, whether right or wrong, allow me to start no queen cells other than by the will of the bees.

4. If your hybrids are crosses between the larger brown German bee and longer-bodied leather-colored Italian, crosses produced in company with your judgment, and you desire a strain of bees for qualities, I should, by all means, breed from your queens; otherwise not.

SELECTIONS FROM OUR LETTER BOX

White Clover Rich in Nectar.

The honey boom has struck us here since the rain stopped, four days ago, and, if the weather continues favorable, the conditions are very promising for a large yield of honey. White clover is very abundant and rich in nectar, and, what bees are left, are doing finely. I had 43 small colonies left, out of 63 last fall. Many have lost all. Basswood will probably not bloom before July 20.

W. H. S. GROUT.

Kennedy, N. Y., June 25, 1883.

Report of the Buckhorn Apiary.

In November, 1882, I packed 39 colonies in my bee cellar; all came out in splendid condition, with only a loss of two queens. I began this season with 38 colonies; they commenced swarming June 16, and there are 1 or 2 swarms every day; they are carrying in honey at a great rate, and have filled some half-pound sections nearly ready for the market. My bees are very busy on red and black raspberries. The white and Alsike clovers are out in full bloom, and basswood is budding full.

F. A. GIBSON.

Racine, Wis., June 23, 1883.

Importance of Universal Frame.

I see in the BEE JOURNAL, a subject is being discussed by bee men that has interested me from my first experience in bee-keeping (as a pleasure more than profit); that subject is the "Standard frame." Now, it is very natural, when this subject is brought up, for each one to say: My frame is good enough for me; but if we would stop to consider, I think all would admit it to be a priceless boon to the bee-keepers of this country, could such a system be inaugurated. Suppose I wish to sell a few hives of bees, my frames are 12x12. B. would like to buy, and would pay a good price, but he uses the Langstroth frame, and could not afford to pay much for them, as he would have to transfer them, so both have lost a profitable sale in not having the same size of frame. I have wished to get a frame of drone brood from a dealer, but as he did not state the size of his frames, I wrote him to learn this, and found he used the Gallup, so I was again disappointed, and he lost a sale. I think the "coming bee" would be sooner attained, for the "crossing" could be better accomplished. But as I am not much of a bee man, and much less a newspaper one, I will leave it for others, more competent; hoping the union may soon be effected, for I am looking for the pleasant day to arrive when I can leave the "throbbing mighty engine" and be with and hear the happy hum of the "blessed bees."

A. P. LANTERMAN.

Pullman, Ill., June 26, 1883.

Buffalo Clover.

I enclose two clover heads, which please give the name of in the BEE JOURNAL. It grows on rich soil, has a coarse foliage, and the bees work on it splendidly. One head is full size—the other is just coming to bloom.

W. MALONE.

Oakley, Iowa, June 18, 1883.

[It is Buffalo clover or *Trifolium reflexum.* This plant is much more common in the Southern States of the Union, being quite rare in the North from New York westward. It is an annual, or sometimes biennial plant of vigorous habit, and undoubtedly a good honey producer. The flowers are larger than those of the common red clover, but shorter, so that the nectar is accessible to the hive bee, whose visits materially aid the fertilization of the seeds. The heads are are especially distinguished from those of red clover by the pedicels or little stalks upon which the florets are raised.—T. J. BURRILL, Champaign, Ill.]

Storing Honey from White Clover.

Bees are doing well here, at present; they are storing honey from white clover, which is plenty. I have one colony working in 72 one-pound sections. My bees came through the winter and spring in good condition, considering the cold winter and late spring.

ALFRED GANDER.

Adrian, Mich., June 25, 1883.

Honey Prospects Good.

Wind and rain appear to be the order of things in these parts; at least so much so that bees cannot work half the time. Bees wintered well, and are now in fine condition, but have not swarmed much yet, on account of its being so cold and wet. We never before saw the like of white clover, and it put in an appearance a week earlier than last season. If the weather gets favorable, the white clover honey crop will be immense. Bee-keepers are feeling good over the prospects, and are laying in heavy for supplies, for the prospects are good for the largest honey crop ever gathered in these parts.

A. W FISK.

Bushnell, Ill., June 18, 1883.

Bees Doing Well.

Bees are doing very well here this year. There is any quantity of white clover, although we are having rather too much rain. I began with one colony in the spring of 1882. I now have 9, hybrids and Italians. I am using a side-storing hive, but I see from the BEE JOURNAL that most of the bee-keepers prefer other kinds.

J. C. TANNER.

Huntington, W. Va., June 25, 1883.

Bees so Busy as to Forget to Swarm.

This is a most beautiful morning. My bees are booming; they are gathering honey so fast that they forget to swarm. I have only had about 20 swarms from 200 colonies, although I have prevented swarming as much as I reasonably could.

A. SNYDER.

Clarksville, N. Y., June 24, 1883.

My Last Year's Work.

I commenced the spring of 1882 with 10 colonies; increased to 24; had 1,030 pounds of honey, in one-pound sections; and sold it at 18 cents per pound. I packed 10 colonies in sawdust, and 14 I wintered in a cellar. I lost one packed, and 7 that were wintered in the cellar, all by spring dwindling. I have had, to date, 6 swarms. The weather has been unfavorable, until within a few days; but bees are working nicely now, on white clover.

WM. PENNEY.

Shiloh, Mich., June 21, 1883.

The Bee Moth.

Please publish in the BEE JOURNAL the essay given by Judge Andrews, at the Texas Convention, and oblige many subscribers.

JOHN H. CHRISTIE.

Dyersburg, Tenn., June 21, 1883.

[We will do so, with pleasure, if the Judge will kindly send it for publication.—ED.]

My Spring Report.

My report from Jan. 1 up to date, is as follows: On Jan. 1 I had 90 colonies; I sold 30, leaving 60 to begin with. I had 10 good swarms early in April, and the hives are all full of bees. I increased them to 99 colonies. I have had to feed these, to keep them alive until the horsemint flow began; it is now here, and nearly gone, and not one pound of honey have I had yet, but I think I will get my bees all built up strong before the flow is gone, which will be 10 days yet. If I only had plenty of bees I could get a little surplus, but bees have dwindled badly. Some brood chilled during the frosty weather, in the latter part of May. There is not one stalk of mint, this year, where 20,000 stood last year. I have about ¼ acre of catnip, which I planted in rows and cultivated; if I had 10 acres, I could not be found now with blasted hopes. A few hills of sweet clover 5 feet high are covered with bloom and bees too. The California pepper tree is also in bloom. We could have perpetual bloom here for 6 months, and often 9 months. There is a field of mint, of 30 acres, some 4 miles off, as thick as wheat, and 4 feet high. This field was plowed last fall, and on account of the cold wet spring, followed by 8 weeks of drouth, it could not be planted. Mr. W. R. Melton, who lives 400 yards from that field, has 100 colonies of bees that are simply booming, so you see *it pays to plant for honey*, wet or dry. I can go to the woods and hunt wild bees for the wax and bees, for a pastime; and when the old, tried, true and trusty friend, the BEE JOURNAL makes its weekly visit, I have time to read all, even the letters about cellars and chaff and all other such fixings that "we 'uns, down here," know nothing about practically. It makes me feel glad to hear such good news from Kentucky, "Bee-keepers all worked down," "Honey flow enormous." My time next, brother, you see. B. F. CARROLL.

Dresden, Texas, June 18, 1883.

Bees Gathering Honey.

We have now had nearly a month since it became warm, and during this time there has been but three days that it has not rained at some time during the 24 hours, and many of the days it has "rained all day." On the night of the 18th, 3¾ inches of water fell upon a level, and this, with the ground already soaked, caused our streams to rise up to high water mark. But little corn and potatoes have been hoed, and the fields are nearly as green as meadows. Plenty of white clover is in bloom, but it is of no use to the bees, which I am feeding to keep them from starving.

LATER.—We have had 4 days of good weather now, and the bees are getting a living, and storing a little in the body of the hive.

G. M. DOOLITTLE.

Borodino, N. Y., June 26, 1883.

Generous Honey Season.

The honey season here was never better. The flow is generous, and the quality is most excellent. The swarming impulse has been simply rampant. My apiary has sent out bees with the energy of a Vesuvius for three weeks past.

G. W. DEMAREE.

Christiansburg, Ky., June 22, 1883.

Rain, Rain.

It "rained 40 days and nights." I would like to know if there is any account as to whether Noah fed his bees on granulated or grape sugar, to preserve them through that spell of wet weather? J. G. WHITTEN.

Genoa, N. Y., June 26, 1883.

[We give it up.—ED.]

Straight Combs, etc.

I have one colony of bees which have the frames and combs all connected together, will some reader of the BEE JOURNAL inform me how to get them apart. It is a Langstroth hive. I also wish to know how to get my bees to build their combs straight.

J. HURST.

Minooka, Ill., June 21, 1883.

Bee-Keeping in Maine.

The bee business is increasing very fast in this part of the State; new land clover, and acres and acres of fire weed furnish abundance of honey of superior quality, bringing the highest price in the market. The only drawback that we have had in the past year, is the hives that we have had to use. Being so far from any of the manufactories of bee implements, we have had to use anything we could get for a hive, now we are better prepared, as a manufactory has started near us. This is a help to us here, and will greatly improve the business. I am not prepared to furnish much in regard to the statistics of bees or honey, but I will hereafter gather what I can and send you. It is a good thing to hear a little news from every one having bees, as we do not all get experience alike, and we ought to give ours to others.

O. B. KEENE.

Fort Fairfield, Maine, June 16, 1883.

High Aspirations.

Several of my bees have selected the highest tree in my yard to alight upon, when swarming, out of the reach of a 26 foot ladder. Why they should select such a high point, I do not know. Two of them have selected the same limb, about 40 feet from the ground, but prematurely, as "their mother did not know they were out." I was obliged to let them hang until they found that their mother was not out, then they returned home, if not sadder, perhaps wiser; so, I may have another chance at them. Why is it that one of my colonies seem to be full of the Old Nick. I cannot touch them with a 10 foot pole, as a dozen will start for me at the same time? It is one that was partly robbed last fall, and was attacked this spring again; but with judicious care and good feeding, I brought them through, and even now they do not appreciate my good intentions. I was obliged to use the "Conqueror," that little engine of smoke, upon them; which brought them to terms. What would the apiarist do to-day without the smoker, at this advanced age of apiculture?

JOHN GOCHENOUR.

Freeport, Ill., June 25, 1883.

[Robbing has been the cause, no doubt, of angering them. The smoker, judiciously used, will conquer them, however.—ED.]

A Lively Rushing Season.

Our swarming season is just over, and we are not sorry, as we have not hardly had time to breath, working day and night; the bees began to swarm on April 1, and continued up to June 10. We have more than doubled our stock, while doing our best to prevent swarming. The Italian queens we got from the BEE JOURNAL apiary, two years ago, are good workers, and right on the swarm. We have had them fill a 2-story hive in a week without the aid of foundation, being 80 pounds of honey in all. We took the comb all out of the second story, threw out the honey, and gave them foundation, and in three days they had all filled again and swarmed. We are getting 1,000 two-pound sections of comb honey each week, and every 8 days, 1,200 pounds of extracted honey. We only run 40 hives for extracted, the balance for comb honey. We find it very difficult to run for comb and extracted honey in one apiary; so, next year, we intend to start another apiary of 300 hives for extracted honey only, with all improvements, such as evaporating tanks, etc. We intend, of course, to retain our present apiaries for comb honey, as there is a good market for No. 1 comb honey, and we put up a first-class article. Can you inform us if there is any machine which makes a No. 1 article of section box foundation and brood chamber foundation, both being made on the same machine? We think there can be a machine to make both by having two sets of rollers. If we do not have any set back, we shall have a full crop, and the bees will store honey up to October. BRAY & SEACORD.

Warthan, Cal., June 15, 1883.

[We think both kinds can be made on the Vandervort mill, and, perhaps, on them all, by having the sheets of wax thinner. Will some one having experience please reply to this.—ED.]

Bees Working in the Second Story.

After selling some bees, I have 23 colonies left. I have not had a swarm yet, but I have nearly all working in the second story, for extracted honey. They have done well for about a week. We have had a cold, wet spring, and it is raining yet, about every other day. It is too wet to do anything on the ground. White and Alsike clovers look well, and are now in full bloom. My bees are in a better condition than I ever had them. I lost about 1 out of 6, this winter and spring. I put my bees in the cellar late in the fall, and took them out on March 13. I have given up uniting bees in the spring; I think it is a failure to do so. I have an imported queen, but I do not sell queens.

E. S. HILDEMANN.

Ashippun, Wis., June 23, 1883.

White and Alsike Clover.

Never was such a sea of bloom known here before. White clover commenced blooming May 11, and it looks as if it was not at its best yet. We have a rain storm every few days, and it has done great damage, especially in creeks and river-bottom lands. It has killed nearly all the growing corn, and it looks as if it might continue to rain yet, for some weeks. The "blessed bees" make good use of every fair hour of daylight, gathering the sweets and swarming. My 51 colonies are booming. I have had 60 swarms, up to date, and I am extracting and taking off comb honey, to give them room. My swarms all return to the old stand, as I have clipped all my queens' wings. I do not think the clipping of my

queens' wings has caused any of their offsprings to be lazy, crazy, invalids or cripples. My Holy Land Italians beat all yet. R. M. OSBORN.
Kane, Ill., June 25, 1883.

Texas Reports a Poor Season.

This is the worst season the bee-keepers of Central Texas have ever experienced. From my 40 colonies I have saved 6, and got 50 pounds of honey, with no hopes of anything further this season. But we do not give up the ship, and will organize a county association on the first Saturday in July, and have everything fully equipped for 1884. E. P. MASSEY.
Waco, Texas, June 26, 1883.

Local Convention Directory.

1883. *Time and Place of Meeting.*

Aug. 29.—Iowa Central, at Winterset Fair Grounds.
Z. G. Cooley, Sec. *Pro tem.*

Sept. 12-14.—Tri-State, at Toledo, Ohio.
Dr. A. B. Mason, Sec., Wagon Works, O.

Oct. 9, 10.—Northern Mich. at Sheridan, Mich.
O. R. Goodno, Sec., Carson City, Mich.

Oct. 17, 18.—Northwestern, at Chicago, Ill.
Thomas G. Newman, Sec.

Oct.—Northern Ohio, at Norfalk, O.
S. F. Newman, Sec.

Dec. 5-6, Michigan State, at Flint.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

A Card to Kentucky Apiarists.

The Kentucky State Bee-Keepers' Association will meet at the great Exposition building in Louisville, about the first of September next, the precise time will be made public soon. We want to make that meeting a respectable and useful one. In order to help forward the enterprise each proprietor of all modern apiaries in the State, is earnestly requested to address me a letter at Christiansburg, Ky., stating the number of colonies employed in his apiary, what race or strain of bees, whether he produces comb or extracted honey, or both, at what price does his honey sell, in what market he disposes of it, whether he has suceeded in building up a home market, what race or type of bees has given the best results, what per cent. of net profit does his apiary pay on the capital invested, and any other matter pertaining to the business which may be of interest to bee-keepers and the public generally.
G. W. DEMAREE,
Pres. Ky. State Bee-Keepers' Ass'n.

☞ The Marshall county Bee-Keepers' Association will meet at the Court House in Marshalltown, Iowa, at 10:30 a. m. and 1 p. m. Subject for discussion: "Summer care." Our last meeting was one of interest to all present. All parties interested in the busy bee in Marshall and adjoining counties, are invited.
J. W. SANDERS, *Sec.*
Le Grand, Iowa.

[We suppose this meeting is to be held next Saturday, July 7, but the secretary forgot to name the day.—ED.]

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1 year, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with $6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For four subscribers, with $8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with $10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

Special Notice.—We will, hereafter, supply the Weekly BEE JOURNAL for one year, and the seventh edition of Prof. Cook's Manual of the Apiary, bound in fine cloth, for **$2.75**, or the Monthly Bee Journal, and the Manual in cloth for $1.75. As this offer will soon be withdrawn, those who desire it should send for the book *at once*.

Bingham Smoker Corner.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 incb stove, and 5x7 inch bellows. Sent post-paid for **$1.75.** Address,

BINGHAM & HETHERINGTON,
Abronia Mich.

All Excelling.—Messrs. Bingham & Hetherington, Dear Sirs:—I am now selling your Smokers almost exclusively. You are excelling yourselves in smokers all the time.
Respectfully, J. G. TAYLOR.
Austin, Texas, May 10, 1883.

Cyprians Conquered.

All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's "Conqueror Smoker" did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham.
G. M. DOOLITTLE.
Borodino, N. Y., Aug. 15, 1882.

During the following three months, Bingham Smokers will be sent postpaid, per mail, on receipt of the following prices:

The "Doctor"..	(wide shield)—3½	in. fire tube,	$2.00
The Conqueror	(wide shield)—3	in. fire tube,	1.75
Large	(wide shield)—2½	in. fire tube,	1.50
Extra	(wide shield)—2	in. fire tube,	1.25
Plain............	(nar. shield)—2	in. fire tube,	1.00
Little Wonder..	(nar. shield)—1¾	in. fire tube,	.65
Bingham & Hetherington Uncapping Knife..			1.15

With thanks for letters of encouragement, and the absence of complaining ones, we tender to our thirty-five thousand patrons our best wishes.
Very Respectfully Yours,
BINGHAM & HETHERINGTON.
Abronia, Mich., June 1, 1883.

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

"The Bavarian Apiary."

During a recent tour through Carniola, Austria, I made special arrangements whereby I now receive regular shipments of

CHOICE CARNIOLAN QUEENS.

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I have also special contracts whereby I am supplied with

EXTRA FINE ITALIANS,

reared in those Alpine regions where I have found the bees to be the most vigorous and prolific. The workers of these Queens are as finely marked as any Italians in existence.

One queen in June or July, each	$4.50
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Five queens in June or July, each	4.05
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The American Apiculturist

is a first-class 32-page Monthly, devoted to bee-keepers and their interests, edited and published by a practical bee-keeper. Its list of contributors is composed of the most scientific and practical apiarists in the country. It is endorsed by our leading bee-masters everywhere.

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Those wishing to secure this number will please send their subscription for three months. Sample copies sent free. Do not fail to read our unparalled offers to subscribers.

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SILAS M. LOCKE, Editor and Publisher,
SALEM, MASS.

1883. 1883.

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10th Thousand Just Out.

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Liberal discount to dealers and to clubs.

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17Ctf Author and Publisher, Lansing, Mich.

1883. JOSEPH D. ENAS, 1883.

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Pure Italian Queens, Bees, Colonies, Nuclei,

EXTRACTORS, COMB FOUNDATION, &c

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13C6t Columbus, Ind.

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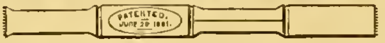

We have just put in several new machines and also a larger engine in our factory, consequently we are in better shape to fill orders than ever for Sections, Shipping Crates, etc., etc. We make a specialty of our

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We can make the "Boss" One-Piece Sections any size or width desired. Send for Price List.

We make the Half-Pound Section any size desired.

JAS. FORNCROOK & CO.
1BCtf Watertown Jeff. Co. Wis., Jan. 1, 1883.

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W. Z. HUTCHINSON,

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Makes a specialty of rearing dark, leather-colored **ITALIAN QUEENS.** Untested Queens, $1.00 each, or six for $5.50; twelve for $10.00. Tested Queens, $2.00 each. Safe arrival guaranteed. Make money orders payable at Flint, Mich. 25Dtf

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BE SURE

To send a postal card for our Illustrated Catalogue of Apiarian Supplies before purchasing elsewhere. It contains Illustrations and descriptions of everything new and valuable needed in an apiary, at the lowest prices. Italian Queens and Bees. Parties intending to purchase bees in lots of 10 Colonies or more are invited to correspond.

J. C. SAYLES,
51D15tB5 Hartford, Wis.

ITALIAN AND HOLY LAND

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The Handsomest Queens for BUSINESS the World Produces.

BUSINESS, BEAUTY and Wintering Qualities Combined.

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Every Queen WARRANTED perfect, and reared under the swarming impulse. Tested Queens of either race, each $2.00; with "Handy Book," $2.50. Queens warranted as good as tested and "Handy Book," $2.25. **Special rates by the quantity.** Send for our 32-page Circular. 22Atf

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A First-Class Monthly

of 24 pages, devoted to AGRICULTURE, HORTICULTURE, STOCK RAISING and kindred interests. Published at

ndianapolis, Ind., by **BROWN & ABROMET.**

Terms, $1.00 a Year, in Advance.

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QUEENS!

Scientific Breeding Tells.

If you want the best and most beautiful Queens, try our strains which we have obtained by long and skillful breeding. Orders filled promptly and satisfaction guaranteed. Send for circular and testimonials. **E. A. THOMAS & CO.,**
18Ctf Coleraine, Franklin co, Mass.

Friends, if you are in any way interested in

BEES OR HONEY

We will with pleasure send you a sample copy of the **Monthly Gleanings in Bee-Culture,** with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes,** all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly,* to
Ctf A. I. ROOT, Medina, O.

HONEY. I wish it distinctly understood that I will not accept shipments of HONEY unless bought by me by previous correspondence.

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For the manufacture of

BEE-KEEPERS' SUPPLIES.

Dunham and Root Foundation a specialty. Italian Queens and Bees from March to November. ☞ Send for my Illustrated Catalogue.

5Ctf **PAUL L. VIALLON**, Bayou Goula, La.

1883. 1883.

ITALIAN QUEENS.

I am now booking orders for queens. I cull my queens as they hatch, is the reason my customers were so well pleased last year.

Send me your address on a postal, and get circular.

Six Queens for $5.00.

J. T. WILSON,
Mortonsville, Woodford Co., Ky.
6BCtf

THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published monthly, and contains the best practical information for the time being, showing what to do, and when and how to do it. **Rev. H. R. PEEL, Editor.**

We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal*, both for $3.00 a year.

BEES Send to Chicago, Ill., for sample of **AMERICAN BEE JOURNAL** Monthly, **$1** a year. Weekly, **$2.**

OLDEST BEE PAPER IN AMERICA
THE AMERICAN
BEE JOURNAL
ESTABLISHED IN 1861

VOL. XIX. CHICAGO, ILL., JULY 11, 1883. No. 28.

THE AMERICAN BEE JOURNAL
Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

Adulteration of Sweets by Glucose—"They Make Money Out of it."

The manufacturers of that vile trash, glucose, are ever on the alert to find new excuses for adulteration. They now assert that pure honey when analized is found to contain "76 per cent. of *pure* glucose," and then foolishly advise the addition, perhaps, of 76 per cent. more of their *impure* trash to it, so that some one dishonest enough to take their advice, should "make money out of it."

Failing any longer to make it profitable for the "mixers," in the large cities, to continue their vile trade, they now desire to enlist bee-keepers to dishonestly feed it to the bees to store it, so that it may be sold *for honey*, and encourage them to do it, because they can "make money out of it."

What do they care if it does poison millions of bees while carrying and depositing it in their combs ?

Why should they have any compunctions of conscience about its effect upon millions of human beings, wearing out their stomachs, entailing disease and death, if they can "make money out of it ?"

The one result, "making money out of it," is the excuse as well as the reward for dishonesty.

The following communication from the able pen of the Rev. L. L. Langstroth on this subject, will be read with more than ordinary interest:

My friend Mr. D. A. McCord wishing to test the value of grape sugar, as a bee-feed, wrote to a glucose manufactory asking their prices. This reply came:

——Feb. 21, 1883.

DEAR SIR:—Yours of the 13th to hand. We will quote you glucose at 4½ cts. per hundred lbs.—in 100 pound kegs. You will find it fine food for producing honey, as pure honey analizes 76 per cent. pure glucose.

Yours Respectfully,
THE GRAPE SUGAR CO.

Mr. McCord wrote again, stating that he wanted grape sugar for a spring bee-feed, and not glucose, and received the following:

——Feb. 26, 1883.

DEAR SIR:—Yours of the 24th received, and shall have attention. We think if you will try it, you will find that you can produce honey very fast, and of fine quality. They feed it very largely in California, and make money out of it. Would like to hear from you after you try it.

Yours Truly,
THE GRAPE SUGAR CO.

Following this letter came glucose instead of the grape sugar ordered. It was about as thick as good honey, and almost as clear as water. As the bees stuck fast to it and died, no use was made of it as a bee-feed. Its taste was sweetish and decidedly bitter. No name was given in the above letters but that of the Company, called after the place where their establishment is located.

Prof. Marsh, of the Miami University Training School, furnishes the following analysis of that glucose:

OXFORD, O., July 5, 1883.

DEAR SIR:—I have tested the sample of glucose syrup which you handed me for analysis, and find that it contains large quantities of sulphuric acid and sulphate of lime. The sample of pure honey was found to have a slightly acid reaction.

Very Respectfully,
B. F. MARSH.

L. L. LANGSTROTH, Oxford, O.

Lime and free sulphuric acid! no wonder it has a bitterish taste. In order "to see what would come of it," Mrs. McCord used it in the making of some gingerbread. The product was poor stuff indeed—not having the ordinary sweetness of corn bread. It *puffed up* remarkably—a thing easily accounted for when the analysis showed how rich the glucose was in sulphuric acid. Syrups, etc., increased in volume by glucose mixtures, are no more to be commended than this expanded gingerbread.

"Pure honey analizes 76 per cent. pure glucose." One would think that if honey was so largely glucose, it would be scarcely necessary to add more to it! It has never yet been made to appear that glucose as pure as that contained in honey or fruits can be *cheaply* produced. If the time shall ever come when it can be, it would still be a fraud to use what has so low a sweetening power (only about one-third that of cane sugar), for adulterating molasses, maple syrup, sugars, candies, etc.

A friend of mine was told by the captain of a boat on which he was travelling, that he carried many barrels South to be used in adulterating their sweets.

Another friend informs me that he saw 40 barrels of glucose at one railroad station, all of which was to be used in adulterating maple syrup!

Mr. Chas. F. Muth, of Cincinnati, O., perhaps the largest dealer in honey in the West, and who has done so much, both by precept and example, to discourage the sale of adulterated honey, has had glucose recommended to him by large dealers in it, as a good thing to mix with honey, so as to "make money out of it." At one time he said to me, that in his opinion, most of the so-called maple syrup in the Cincinnati market was largely glucosed.

It is only within a short time that any quotations of glucose or grape sugar could be found in the grocer's papers. Will any advocate for their use, let the world know for what legitimate purposes the vast amounts made of them are used? Dare any one connected with the making of glucose, tell the public in plain words exactly for what purposes they are actually used? I fear not.

Confident assertions are not wanting, to show that only a pure and harmless article is made, and, you might imagine, that its makers are deeply grieved that this good creature of God is ever used by bad men for shameful adulterations. They would be ever so glad to put a stop to said doings if they could. Believe this, who can?

I do not know that hitherto any proof has been given to the public, that some, at least, who manufacture glucose and grape sugar, are acting the part of tempters, and even going so far as to suggest to those who wish to purchase them for a legitimate experiment, how money is to be made by adulterating honey with their wares,—"There is money to be made out of it." Does not such a way of doing business strongly suggest the crooked methods of those who deal in counterfeit money ?

Business, in any proper sense of that word, means transactions between parties, where both buyer and seller are benefitted by the deal. Tried by this standard, adulterators of the great commodities of life, will not seem to rise much if any above the level of gamblers, counterfeiters and cheats.

You will notice, Mr. Editor, that I do not give to the public the name—nor does Mr. McCord authorize you to give it—of the company with which he was in correspondence, for we do believe that this company is a sinner above all others who make the same products. The original letters are herein sent to you, so that in the mouth of at least three witnesses their genuineness may be established.

Oxford, O., July 3, 1883.

The "original" letters sent to us by Mr. Langstroth, have been scrutinized and returned to him. They are correctly printed at the beginning of the above article. Just think of the villiany of asserting that "they feed it largely in California," to deceive bee men in Ohio, and get them to engage in the nefarious business of adulteration!

No matter if the large trade in California honey is ruined by the circulation of this false report, so long as "they [the glucose manufacturers] make money out of it."

It is high time that stringent laws were enacted and rigidly enforced against this hydra-headed monster adulterator!

Going South.—The *Planters' Journal* remarks as follows about bee-keepers emigrating to the South:

> Large numbers of Northern bee-keepers are seeking the flowery fields of the South, where the bees find ample natural foraging ground, live all winter without being housed, and in various other respects prove more profitable to their owners. There is no earthly doubt but that the South is destined, and that at no distant day, to become the greatest honey producing and honey exporting country on the globe. We hope soon to see a regular Southward exodus of men and women engaged in this industry, from the North and Northwest.

Honey Shower.—John B. Drake, of Kappa, Ill., extracted in two days, recently, 600 pounds of honey from 12 colonies of bees. A pretty good example of the "honey shower" now existing all through the Northwest. Keep all the buckets right-side-up, to catch it.

A Few Pointers.

The *Grange Bulletin* contains the following under the caption of "Things about bees worth knowing:"

> The mother queen leads the first swarm of the season, and the second as well as the third swarms, are led off by the young virgin queens.
>
> Not one swarm in a hundred will go direct from the old hive to the woods if led by a prolific queen, but will settle near by, before taking their farewell leave of the old home.
>
> It is always best to have your hives ready for taking care of your bees as soon as settled, if you allow them to swarm in the old pod-auger style. Always do your swarming in the proper manner and at the proper time, which would save many would-be runaway swarms if left to follow their own inclinations. Artificially swarm your bees.
>
> It is a well known fact that bees never visit two or more distinct classes of flowers on the same trip, but always procure a full load of pollen or honey of which ever kind they commence on first, and return to their hive or home to unload before making a change.
>
> Bees are very useful in the fertilization of flowers, seeds and plants, as well as being very necessary in the proper maturing of all classes of fruit, especially apples, peaches, pears and plums; also many other valuable and useful fruits of which we have not time or space to enumerate. Watch with care and you will learn many valuable lessons from your bees through the various departments of life.
>
> Queens are produced from the common eggs that would have hatched worker bees if left in the common brood-cells and fed the usual food of honey and farina; but having been provided with a *royal cell* and also *royal paste*, as food on which they are bountifully provided, it transforms them into a royal queen, who is to be the mother of the future increase of the hive, or swarms.

Bee-Keepers' Picnic.—The Indiana *Farmer* gives the following as a partial report of a bee-keepers' picnic in that State:

> The bee-keepers of Hendricks and Boone counties held a joint society meeting at the residence of Dr. J. H. O'Rear, at Lizton, June 23. The gathering was really a bee-keepers' picnic, and was well attended, bespeaking success to the Societies. Every subject of interest to bee-keepers of the present time was thoroughly discussed; the members showing a knowledge of the subject which can only be acquired by careful study and diligent inquiry. A committee of members from both Societies was appointed to arrange a second joint meeting of the Societies at some place in Boone county during July or August. Too much cannot be urged in the furtherance of meetings of this kind. The plan has been followed by the many horticultural societies throughout the State, making them very successful and interesting to all concerned.

OBITUARY.—We are sorry to announce that Death has entered into the circle of publishers of bee papers, and snatched, as its victim, Mr. Theodore Houck, late publisher of the *Bee-Keepers' Exchange*, Canajoharie, N. Y., who died at Denver, Col., on Saturday, June 16, 1883, at the age of 26¼ years. His death was quite sudden. The *Exchange* gives the following particulars:

> We are reminded, in the death of Mr. H., of the fraility of this life. Up to the first of last January Mr. H. was a perfectly healthy man, having passed an examination just prior to that for a life insurance. On the 2d of January, Mr. H. attended the meeting of the Eastern New York Bee-Keepers' Association, held at Albany. He put up at a hotel that night, and was assigned a room and bed that had not been used for some time; the consequence was that he took a severe cold which settled on his lungs and hurried him to his grave with quick consumption. Mr. Houck was a thorough bee man, beginning when a boy, and continuing until his health gave out and death came. He loved the bees, and was never happier than when among them. His public career was short, about 18 months ago he purchased the supply business and *Bee-Keepers' Exchange* from Mr. J. H. Nellis, and conducted them up to within a few weeks of his death, his failing health compelling him to place them into other hands. He leaves a widow bowed down with grief, having in one short year buried her husband and little boy, their only child.

The BEE JOURNAL condoles with the stricken family in their affliction, and sincerely hopes that Mr. H. had, in life, provided for his family by obtaining the insurance policy mentioned by the *Exchange* in the above paragraph.

Lessons of Industry.—An exchange remarks as follows:

> The bee has long been a type of the industrious worker, but there are few people who know how much labor the sweet hoard of the hive represents. Each head of clover contains about 60 distinct flower tubes, each of which contains a portion of sugar not exceeding the five-hundredth part of a grain. The proboscis of the bee must, therefore, be inserted into 500 clover tubes before one grain of sugar can be obtained. There are 7,000 grains in a pound, and as honey contains three-fourths of its weight of dry sugar, each pound of honey represents 2,500,000 clover tubes sucked by bees.

Bee Statistics in Germany.

Mr. C. A. Stoepel translates the following on this subject from the *Deutcher Bienenfreund*, for the *Bee-Keepers' Exchange:*

> The census in Prussia, Germany, of 1883, shows a decrease in the number of colonies of bees kept since 1873. The whole number of colonies kept in 1873 was 1,461,055, and in 1883 are kept 1,232,231 only, a decrease of 228,824.
>
> Mr. Suppea, a notorious bee-keeper, feels quite disappointed over these figures. He thinks that bee-keeping cannot be a paying business to many bee-keepers, or that the bee-keepers must have lost heavily during the last terrible winters.
>
> He says that these figures are a scorn and sneer in the face of all the work done by the different bee-keepers' societies, and all methods set forth in many manuals on bee-keeping toward the advancement of apiculture. Probably these figures are a judgment on all the new-fangled bee-houses and foreign bees, or the result from low duty on foreign bees.
>
> C. J. H. Gravenhorst thinks as a reason why bee-keeping has not been successful with many is, that there is no law protecting bees from the many dangers they are exposed. Lawsuits over the keeping of bees increase from day to day. Birds, although their benefitting the public, is sometimes very doubtful, enjoy such a protection, why cannot bees enjoy such a protection, as well as birds do?
>
> At present there is a project of such a law, appended with 16,000 names of bee-keepers before the Reichstag, urging the same to be adopted as a law.

◆

Why Bees Work on Sunday.—An exchange gives the following very silly story as a reason:

> We have just been interrogated by one of our students who asks the question: Why do bees work on Sunday? To which we answer: In the beginning, God created all things perfect, and to the honey bee he gave an unusually keen acuteness of smell which enables them to become great foragers. And seeing that the red clover was a grand honey-producing plant, he also saw that the honey-bee was likely to outstrip all other insects in storing up large quantities of honey, especially so if allowed to work the red clover; and to prevent which he gave the hive bee its choice either to work on the Sabbath and let the red clover alone, or to work on the clover and rest on the Sabbath, the honey-bee preferred to work on the Sabbath and let the red clover alone. Hence, the reason the common bees of this country leave the red clover for the humble, or what we commonly call the bumble-bee, to work on. And thus the honey-bee is permitted to work on the Sabbath; while we, as his created beings, in His own likeness, are commanded to remember the Sabbath day and keep it holy.

Foul Brood.—Mr. E. W. Felton, of Hastings, Minn., has sent us a sample of what he thinks is the foul brood, with the following letter dated July 2:

> I send a comb of foul brood, which I have had in my apiary for the last four seasons. The second season I undertook to eradicate it, and commenced Aug. 7, giving the bees clean hives and foundation, and scalded honey; but it was so late that they did not build up strong enough to winter without doubling up, which reduced them from 30 to 10, and the disease still remained with them. They increased from 10 to 16 last season, and gathered 800 pounds of comb honey and 200 pounds of extracted. I brimstoned them last fall, boiled the hives, burned everything else, and bought 30 colonies last spring; they are in the midst of white clover, and storing honey very fast, and no signs of foul brood yet. I let one of my neighbors have a few colonies last season, three miles from my place, they are doing well, and have no foul brood now. I would like to know if they ever get rid of it without any help. Will some bee-keepers, who have it in their apiary, give their experience with it?

Having had no experience with foul brood, we do not feel competent to give any advice or opinion. It is committed to the flames at once. We do not like it around, and hope our friends will *not* send us any more samples of it.

◆

☞ We have received a large pamphlet of 50 pages on the Honey Plants of Italy, enumerating them, giving their time of blooming, qualities for honey, etc. It is written by Dr. L. Savastano, and published at Napoli, Italy.

◆

Imported Queens.—The Lexington, Ky., *Transcript* remarks as follows about an importation of bees just arrived at that city:

> Messrs. Mucci and Frank Storm, of our city, brought into our office on yesterday, some bees that they had just imported from Italy. They had come by express in a neat little hive, with honey in it. They cannot speak a word of English, but they sting in the American language. The importation was solely for the sake of the queens that were in each little hive, and the few common bees sent along with them were simply as a retinue for their royal highnesses; the queens, like royalty, queerly preferring to starve to death rather than do any menial service for their own sustenance.
>
> The queens are easily distinguishable by the practiced eye. A single queen bee imported to this city once cost Dr. Dillard $30, beside a trip to Ohio to bring it here. Bees are imported here from Germany, Cypress, Palestine and Italy. Those from Italy are the best workes, and are gentler than others.

◆

A Sample—By George.—The Fremont, Mich., *Indicator* says:

> "'The compliments of the season,' was the inscription attached to a choice piece of honey from the apiary of Geo. E. Hilton, yesterday. George now has 43 colonies of bees, making his prospects for honey 'simply immense.'"

That is the correct way; Mr. Hilton has *hit the nail on the head.* Now, follow this up with some instructions about "Honey as food," and all the honey will be sold as fast as produced.

◆

☞ Do not let your numbers of the BEE JOURNAL for 1883 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., July 9, 1883.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—Extract. honey has commenced to come in freely, and a large crop is reported from all quarters. The demand is very good, and keeps pace with the arrivals. For choice extracted honey I pay 7@10c; the latter price for choice clover. I have received several nice lots of comb honey, for which we paid 15@18c on arrival.

BEESWAX.—Arrivals of beeswax are plentiful. We pay 32c. for a good article on arrival.

CHAS. F. MUTH.

NEW YORK.

HONEY.—Best clover in 1-lb. sections (no glass) 20@21c.; in 2-lb. sections (glassed) 18@20c. Fair quality, 1 and 2-lb. sections, 16@17c Extracted, white, in small barrels, 10@11c.; buckwheat, 8@8½c.

BEESWAX.—Is more plentiful. Prime yellow sells at 36½c.

H. K. & F. B. THURBER & Co.

CHICAGO.

HONEY.—The demand for extracted is good, and the market bare of all unfermented honey. Prices range from 8c. to 10c. Comb remains lifeless and will until the new crop comes, or until August. Sales of comb are being made at 8c. to 15c.

BEESWAX—30@35c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY.—New extracted is arriving freely—selling for 7 and 8 cts. New comb coming forward slowly; extra white, 16c.

BEESWAX.—No beeswax in the market.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Some new comb jobbing at 14c, but old do. nominal. Only a few barrels of extracted and strained sold within quotations—6½@7½c.

BEESWAX — Sold irregularly from 32@34c—mainly at 32@33c.

W. T. ANDERSON & Co., 104 N. 3d Street.

CLEVELAND.

HONEY.—There is a moderate sale for best white 1-lb. sections at 18c, occasionally 19c, but 2 lbs. are not called for. Extracted has no sale at all.

BEESWAX—Not offering.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—Our supply is gone; we have none to quote.

CROCKER & BLAKE, 57 Chatham Street.

CORRESPONDENCE.

For the American Bee Journal.

Making or Forming Nuclei.

G. M. DOOLITTLE.

Every bee-keeper who expects to be up with the times, and make the most from his bees, should have on hand, at this season of the year, several laying queens, held in reserve to supply any colony needing a queen at a moment's notice; especially where any method of increase other than natural swarming is adopted, reserve queens should be kept on hand to be given to the queenless part of the divided colony.

In order to keep these reserve queens, it is necessary that we have a nucleus or small swarm of bees in which to rear them, from the time the queen-cells are ready to be taken from the colony producing cells, till the queen is fertilized and ready to become the mother of a colony.

Many ways have been given for making a nucleus of bees, most of which prove to be a failure, and result in loss with the inexperienced. The one most commonly given in our books and bee journals is to go to any colony which can spare them, and take a frame of hatching brood and one of honey, together with all the bees thereon (being careful not to get the old queen), and place them in a hive where you wish the nucleus to stand; thus forming a minature colony of bees. The hive is to be contracted to the requirements of the nucleus, and in 24 hours a nearly mature queen cell is to be given. This looks very pretty on paper, but when we come to put it in practice, it is found that in nine cases out of ten, so many of the bees will return that our nucleus is practically good for nothing, and often results in the chilling of all the brood in the frame, if the weather is cold. The other day, while in conversation with a bee-keeper having several years' experience, more than the writer of this article, he remarked that his nuclei had "gone back on him," and when asked how he made them, he gave the above plan. I remarked that it was strange how young a bee would return to the old hive under such circumstances, when he said there was scarce a hundred bees left in his nucleus where he had put a quart or more.

If the above plan fails in the hands of a bee-keeper having 16 years or more of experience, how can it be expected that the novice will succeed with it? Several years ago, after repeatedly failing with the above plan, I had occasion to set a frame of bees and brood, on which was the queen, into an empty hive, and to my surprise nearly all the bees staid where I placed them. In a few days I returned the queen, and as the bees had become established in their new location, while the queen was with them, a good nucleus was the result. Thus I learned how I could form a nucleus which could be depended upon every time. Another thing I ascertained, that a colony having queen-cells considered such cells the same as a queen, and by taking a frame of brood which had a nearly mature queen-cell upon it, together with one of honey, bees and all, from such a colony, a nucleus could be formed so that nearly all the bees would stay where placed. Thus to make several nuclei, all I had to do was to count the queen-cells in the hive about the time they were sealed, then go to the other hives and take frames of hatching brood (brushing off all the bees), till I had as many as I had queen-cells, and place them in the hive having the cells. Two days before the queens were to hatch, cut out the cells and fix one in each frame of brood, and the next day make the nuclei by taking the frames to their several hives, giving each a frame of honey. In this way I rarely, if ever, had a nuclei "go back on me," and have so framed the most of my nuclei till the present season. This season I have adopted a new plan which pleases me so well I will give it to the readers of the BEE JOURNAL, so they can share in my pleasure. Seeing a note in some convention report, of how a party had a queen nursery made so he could hang a frame of queen-cells in it, and then hang the nursery in a full colony of bees in the place of a frame of brood, I jotted down in my reference book (see former article on "How to use our bee journals"), under the appropriate date, "Try forming nuclei in that way," giving page and bee journal where it was to be found.

When the time arrived I made a cage of wire cloth, which would hang in the hive, and large enough so that one frame would hang inside of the cage. I now got a frame of hatching brood, brushed all the bees off from it, hung it in a hive having a full colony of bees, and left it six days, when I had the cage pretty well filled with bees, and more hatching all the while, I now took it to a hive where I wished a nucleus to stand, took the frame out of the cage, placed a frame of honey by the side of it in the hive, placed the cage in empty side of the hive, so the bees which adhered to it could get with the rest on the combs, and I had a nucleus so formed that none of the bees could go back, for they had never had a flight. I was also independent of the weather, for a nucleus could be thus formed during quite cool days and nights.

Another thing which pleased me still more: The next time I tried I inserted in the frame of brood, before placing it in the cage, a queen-cell nearly ready to hatch. As this queen-cell hatched in a day or so, I had a queen 5 days old in my cage when I took it to my nucleus hive. In a day or two she took her wedding flight, and I had a laying queen 5 days after I formed my nucleus, thus making a great gain of time. I have written this in a hurry, and if all is not sufficiently plain, I will describe it further. All will readily see the advantage of the plan.

Borodino, N. Y.

For the American Bee Journal.

A Few Wrinkles From

J. O. SHEARMAN.

On page 302, it is stated that the queen "utters shrill notes of anger." Allow me to state how it is done; perhaps it is not generally known. The queen makes the noise termed "piping" with her wings. I have repeatedly seen them do it, and shown it to other bee-keepers. The motion is much the same as that of a cricket when chirping (so called). I did not suppose any bee had a voice, in fact, how could they shout so loud with their proboscis? Because—elephants do? But elephants *have* to shout through their trunk or keep still, as they have no wings to vibrate.

Wrinkle 2. As so much is said about introducing, I will say that I always liberate a choice queen as late in the evening as I can see to do it, unless the conditions are all favorable. A queen can be quietly dropped into a prepared colony with hardly any risk, if put in so late that the bees cannot see to fly, and so quietly as not to stir them up. I used to do it by a round wire cage, with a plug at each end, and a string tied to each plug, and then ends of string brought out from under the quilt-cover, then leave the wood cover off the hive and pull the strings gently till something (the plug) separated. It would be done so quietly and late that "no one knew it but me." Another point is, the queen will not crawl out of the hive in the dark, as sometimes happens in mid-day. The queen is to blame for nearly one-third of the failures in introducing, provided, of course, the colony has no queen cells. Now honey is coming with a rush, and it may be done almost any way, and the quicker the better, to save time.

Wrinkle 3. Can a queen breed two kinds of drones at the same time? or would it be called an indication that there might be two queens in a hive, to see drones like pure Italians, and pure blacks, living together by the hundreds? How is that Mr. Heddon? Please answer through the Weekly.

To explain my case—I have a very strong colony, put up last year for extracting, with a full set of drone combs in the second story. I had one of those dark Italian queens, impurely mated; the colony did not swarm last year. I ran all the season for extracted honey, and did well; then, in the fall, being very busy, I was caught by the snow before all my bees were packed for winter, and, as we had much weather last fall that was too bad for brushing bees off the combs, this big one was among those unpacked, and therefore was carried into the cellar with the rest. It weighed over 100 lbs., possibly 150 or more. They wintered tip-top—went to breeding early, and kept it up, as they had plenty of backing. They filled the brood chamber, then went for the drone combs, and filled them all but two (or else emptied them, which?) any way, they weighed much less. Then I interfered, as we had a little spell of mild weather (this was about fruit bloom time). I took away all the drone combs, put them in a hive, gave them one that had a little brood in (worker brood), and a ripe queen cell, and started in for a drone swarm as an experiment. The queen came out all right, but took longer to fertilize than usual and did not lay much, but this may have been owing to the bad spells of weather we had at that time. Then I gave them a frame of brood, but, as they did not flourish, last week I took away all the drone combs, put the queen in a new hive on the old stand, moved the drone swarm away, and killed 1670 by count, besides what few I would waylay by cuffing one and kicking another when down. About half or more were the yellowest drones I ever saw, and the rest as near like black drones as I know how to make them Now, did one queen furnish the brood for all those drones, or have help? or did they merely run out of stripes for them? Mind, the drones are not all dead yet, only thinned out some, and it was not a very good day for drones either.

How many drones will a swarm have? Owing to circumstances? The Text books say 200 to 300.

I once put a drone comb in an Italian colony, to raise some on purpose, and when I had done with them, I killed 1900.

Wrinkle 4. Noticing Mr. Heddon's indicator on page 301, also so much talk last winter about little slates, moves me to mention my method of keeping track of what is going on, which I call signals. I use two or three little sticks to tell most of what I want to know in regard to the condition of my bees in the working season. For instance: 1st division, a stick laid on the front part of a hive has reference to the bees, while on the back part refers to honey or surplus arrangements.

2nd. A stick laid lengthwise, or with the frames means all right, or in working order, or it has been attended to; while if it is laid diagonally, indicates something doubtful, or in *statu quo* for the present only, but will need to be looked at again some time.

3d. Anything laid crosswise, may be it needs something done, while two sticks laid crossing each other show that part of the hive needs looking after urgently, etc.

The larger the object in case of an urgent signal, the more urgent is the call. It will be seen that much can be said with a little movement of one stick or two, and you could easily see them as far as you can get a fair view of the cover to the hive. If I have a signal to show that something needs to be done with any hive, I can trust to my memory for the rest, and so keep posted as to the needs and condition of my bees (100 colonies or more), without writing much, and it is quicker.

The most I write down is the pedigree of queens (and that by number), and anything in regard to nuclei in rearing queens, etc., though most of that can be shown by a stick. I use entrance blocks mostly.

On page 300 the sense was perverted by putting a period at profit, where there should be no pause (4th line from the bottom of the page).

New Richmond, Mich.

Prairie Farmer.

Hiving Bees—Clipping Bees' Wings.

MRS. L. HARRISON.

A lady called on me yesterday who had caught a runaway swarm of bees and hived them in a nail-keg. They had been in it four days and she had procured a Langstroth hive, and wanted to put them in it. A friend, "who knew all about bees," told her to jar them down in front of it. Had she done so, their nice white tender comb, that they had built, would have broken, and might have killed the queen in falling. A better way would be to alarm the bees with smoke, invert the keg, and place another over it, and rap on it with a stick. The bees will crawl up into the empty keg, and cluster in about 20 minutes. The bees are then out of the way, and the comb could be taken out, and fastened into frames with little splints. While this is being done. the driven swarm should be placed where the old one stood so that the bees returning from the fields will unite with them. A warm part of the day should be chosen to do the work, as many bees will then be absent in the fields and out of the way. As soon as the comb is transferred to the frames, it should be put into the hive, and placed where the keg stood, and the bees jarred out in front of it. If the bees do not incline to enter it, they should be driven with smoke. If honey is abundant, they will soon be at work repairing the damage, and bringing in honey as though nothing had happened. An expert transfers without driving, but a novice had better have them out of the way.

Bees are full of antics this season; they ascertain what time their neighbors are going to *flit*, and join company. They are not always in good humor, and when one colony clusters on a limb, they fight another joining them. It is only a pleasant pastime to hive one colony clustered alone, but when several unite, it is a pandemonium. If the queens can be caught and caged, order may be restored, but this can be seldom done, as it is no easy task to discover a queen among so many thousands moving constantly. If these united colonies are hived together, only one queen will be retained; the others will be destroyed. Sometimes they will issue again, and cluster separately, to the delight of their owner, but oftener enter other hives, raise the mischief generally, and many will be destroyed.

This week one of these erratic colonies issued, after being hived a couple of days. We saw them, and fortunately caught her majesty before she took wing, and pinned her to a comb in a tin cover with a wire gauze top, where she is now, much to my satisfaction. A comb of unsealed brood was also given this colony to nurse and rear, so that they may forget their foolishness, stay at home, rear children, and mind the house. As soon as this colony missed their queen, they returned in search of her, entered the hive, and finding her, set up a joyful hum.

Many apiarists practice clipping the queen's wing, so that when the colony issues they will return. as she cannot accompany them. When they swarm she crawls out, and can be picked up, placed in a new hive, and if the old one is removed, and the new one put in its place, the bees return, enter it, and, finding their queen, remain. It can now be removed to the stand it is to occupy, and the old one restored to its former place. Some persons, ignorant of the habits of the honey-bee, clip unfertile queens; this ruins them, as they cannot fly out to meet the drone.

The first swarm is accompanied by the old queen—which is fertile—all after swarms have unfertile queens, and if they are lost on their "bridal tour," the colony will dwindle away, unless supplied with another, or the means to raise one, as there are no eggs in the hive. The loss of the queen may be known at first by their mournful hum, running out and in of the hive, and touching the antennæ of their fellows. In a day or so they appear listless and idle, but if a queen, or a queen-cell, eggs or larvæ are given them, all be activity and life.

Peoria, Ill.

For the American Bee Journal.

A Review and a Reply.

JAMES HEDDON.

I am much in sympathy with the individualism expressed in Mr. W. H. Stewart's article on the standard frame, on page 332 of the current volume.

As one of the advocates of the standard frame, I want to say that I favor the adoption of a standard, as near as possible and practical. I believe the Langstroth frame to be the best in use, all things considered. I may be in error; however that may be, I am forced to express my honest opinion, if I express any. Now, I would not make a law to compel any man to change one hive. That would be wrong. I will, however, urge all who are beginning, or who can change without too much sacrifice, to do so. Just suppose for the sake of the argument, that the Langstroth frame is as good as any, and no better. The time has already arrived when it will pay to change quite a number of hives, or if you have 10 or 20 American hives, to adopt the Langstroth hive for all future increase, and close out the Americans as time and circumstances make it practical. I should do this if I had 50 of them on hand; yes, even 100. Now if I thought the American hive the best, *enough* best to pay for my paying extra prices for irregular supplies, I would use it if I was the only man that did, and all the world clammored against me. I honor him who has the grandeur to entertain convictions of his own, and the bravery to announce them on all proper occasions. I am the last one who wishes to force him to sacrifice his manhood by renouncing his convictions, either by the finger of scorn or withdrawal of patronage. I like Mr. Stewart's spirit, but I fear he has over-estimated the call to join the standard frame army.

A CORRECTION.

In reply to Mr. Schrock, on page 336, I wish to correct an error made by you, or I, Mr. Editor, and that is: "If I go to a colony of any kind or size, at any time, and remove the queen, they *construct* no such queen *cells* as the same colony will when they do it of their own accord, with the queen in the hive." The italics shows the change. I presume, in my hurry, I made the mistake.

The pending "honey glut," that which I have so long expected, it seems, is well-nigh upon us. It is with much interest that I await and watch the results which this state of things will have upon the tweedle-dee element of our pursuit.

Dowagiac, Mich., July 4, 1883.

For the American Bee Journal.

The Best Size for Brood Frames.

DR. G. L. TINKER.

All things considered, what is the best size for brood frames? We are told time and again that the standard Langstroth frame is. It is argued chiefly that it is the best, because so many use it. As practical, valid reasons do not appear to be forth coming why it is the best, we are inclined to the belief that much of the high-sounding praise bestowed upon it is either vague or intended for buncombe.

The truth is, that so many bee-keepers use the Langstroth frame because it was the size recommended by the Rev. Langstroth, and first introduced under his patent. Thousands of his original hives were disseminated over the country before any other size of movable frame hives were extensively known. And many continue to use his frame not because it is thought to have special advantages over any other size, but out of respect to one of the most noted bee-keepers of this country, past or present, which is a reason of some merit. Again, it has had extensive and systematic advertising, and it is due, unquestionably, to the above causes that it is more widely and extensively disseminated in this country than any other size of frame.

It is well known that the adoption of the Langstroth frame in Europe has made no great headway. If it had the singular merit of being the *best* frame for any and all purposes of bee-keepers, as is claimed so confidently, we can well think that our European friends would not be slow to adopt it as a standard.

THE SHALLOW FRAME.

What were the inducements that led the Rev. Langstroth to adopt a shallow frame? It will be remembered that there was a time when it was thought that a honey-board having auger holes through it for the bees to pass up into two or more large boxes, was the right thing. Very well, it did not take so good an observer as the Rev. Langstroth very long to ascertain that even black bees would not travel more than half a mile through shallow chambers and auger holes in order to get into the boxes and expect them to store surplus to advantage. He, therefore, made the shallow frame, and set the boxes down as near to the brood as possible. And he found that a frame about 9 inches deep gave the best results. As to this one point, I do not believe there is a bee-keeper in the country who will dispute the correctness of his finding where a honey-board is used, and this principle will hold true in any case where the shallow chamber above the brood frames is allowed, honey-board or no honey-board.

So my first argument against the Langstroth frame is to score one for it. Is not that fair? But an unprejudiced consideration of the points that go to make the best frame demands it. My objection, therefore, to the standard Langstroth frame is in the length, and I opine that the sole reason that it was made so long was to accommodate just two more 6-pound boxes at the rear of the hive, as the modern system of tiering up section boxes was as yet unthought of, and without which sufficient surplus capacity on the top of the hive could not be had. There is, however, just one advantage in the length, but this is slight, and more than counterbalanced by a number of serious disadvantages.

BEST WINTER FRAME.

It will be remembered that in the spring of 1881, after the hard winter, conceiving that there might be some very great advantage in the size of brood frames, either in depth or length, or both, for safe wintering, the writer undertook a searching investigation to that end, and collected much valuable information on the subject. This investigation developed the fact that there are two points of advantage in the size of frames for wintering; an advantage in the length as well as in the depth; that the advantages of the American and Gallup size of frames in depth over the Langstroth frame were offset by the greater length of the latter. Consequently the result in wintering on these frames, other things being equal, was about the same.

As a matter of fact, the Shuck and Quinby size of frames are the best to winter bees upon, and both of these are longer and deeper than the Langstroth. The reason that the editor of the BEE JOURNAL was able to give a better showing for the Langstroth frame in his general report than I gave in mine on the result of wintering 10,000 colonies of bees in the northern States, was due to the fact stated by Mr. Geo. W. Baker, in the June number of the *American Bee-Keeper*, viz.: "The report being taken from all over the United States." That is accounted for as follows: There are probably ten Langstroth hives in the South to one of all other kinds of movable frame hives. As bees winter the best in the South, it can be readily seen how reports from Virginia, West Virginia, Kentucky, Tennessee and Arkansas should materially alter the footings of the reports made here at the North, if included with them. Recognizing early this liability to error, it was stated expressly in my report that it was from the northern States only, and the result, as is well known, was a showing against the Langstroth frame, squarely and honestly made, and which, in my opinion, approximated the result here at the North very closely.

The difference between our reports not being very great, caused me to give little attention to it at the time for a reason given in my report (see page 180, BEE JOURNAL for 1881), viz.: "As to the best winter hive, the tables do not show such a great difference between the standard hives as between the different modes of wintering." My conclusion was, that the difference in the size of frames, as far as wintering is concerned (especially in protected hives), is not worth contending about.

I have been thus explicit in the review of that investigation, to set at rest, if possible, the idea of so many bee-keepers that the shape of the brood frame is any considerable factor of the problem of successful wintering. Hence, in footing up the points of the best frame, I shall not take into consideration the fact that a long and deep frame is a little the best to winter bees upon, since, if properly protected and ventilated, bees will winter about as well in one kind of hive as another, and if I remember aright, the editor of the BEE JOURNAL has expressed himself to about the same effect.

The points that can be sustained against the standard Langstroth frame are as follows:

1. It is a great disadvantage over a shorter frame in building up weak colonies in the early spring, since the bees will cluster in the front end of the hive, leaving the whole back end vacant, so that the heat of the colony cannot be economized by a division-board.

2. The top-bar is 5 inches longer than necessary to set on a rack containing 28 one-pound or 21 two-pound sections. I use racks of these sizes on 9 Gallup frames with fair success, and the top-bar of the frame is only 13 inches long.

3. It cannot well be made so that the top-bar will not *sag* in the centre. Nor can it be wired by any process that I have seen, so as to hold the top-bars true and in line with each other. The result is, that in producing comb

honey the top-bars are always more or less waxed up, and are troublesome to clean off so as to get the frames out of the hive. With me this has been the most serious objection.

4. The small sections cannot be used to advantage on a long sagging frame. There are those who will likely be pleased to learn this, but let me say right here, that there is a future for the half-pound section that will astonish some of the slow-going wise-acres.

5. It is, for many persons, too heavy to handle with ease and rapidity.

6. The bees do not, as a rule, build so straight and perfect combs in a large frame as a small one.

The above will, it is hoped, be enough to satisfy those who have been going into ecstasies over the Langstroth frame, that it is not a perfect frame, nor yet the *very best*. I have the Gallup frame in use in the most of my hives, but am free to admit that it is about 2 inches too short for an exclusive top-storing hive. It, however, gives satisfaction, is easily handled, and the combs are generally built true, while the top-bar is seldom found sagged when made of only 5-16 inch stuff one inch wide.

I find that the top-bar of the frame may be 15 inches long, and not sag to give trouble, while it will afford *ample room* on the top for any kind of section. My judgment, therefore, is that a frame 9x13 inches inside measure, or thereabouts, is about right for all practical purposes, and if ten of them are used in a hive, it combines more favorable points than any other size of frame.

New Philadelphia, O.

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For the American Bee Journal.

Adopting a Standard Frame.

A. J. SCHROCK.

As this subject is again being discussed, let us consider what size would give the best satisfaction. 1. In regard to changing those already in use. 2. In making new ones. As most of the frames now in use are the Langstroth frame, we should adopt a frame similar to that. Some have preferred a frame 10x15 inches, inside measure. I object to this size, because those frames that are shallower than 10 inches, could not be used to advantage. 3. The same dies could not be used in making foundation, etc. The only objection I have to the Langstroth frame is that it is too long, and I am inclined to think a frame several inches shorter would give better satisfaction. For this reason I think we should adopt a frame 9⅛x15 inches, inside measure. As this size is just 2 inches shorter than the Langstroth frame, that frame and hive could be used simply by cutting off 2 inches from one end. The one-pound sections could be used, if need be, or three one-pound sections and 2 half-pound sections could be used end to end. Six sections 4¼x5 inches will fill a broad frame, while 8 4¼x4¼ inches are required to fill the Langstroth frame. A section 4¼x5 inches is a more convenient size than any smaller size. They will hold a little over a pound, and when well-filled, 1¼ pounds. If a customer asks for about 1 pound of honey, he will get a little more; thus increasing the amount sold, or they can be made to hold just 1 pound by making the sections narrower. It has also several advantages over the Langstroth frame; being 2 inches shorter, it is not as liable to sag; not as many wires are required when wiring the frames. It needs no centre brace to prevent sagging. As 10 Langstroth frames are too many for one hive, 10 frames 9⅛x15 would be just enough. But as each one has a mind of his own, I fear our talk will not amount to much, but if once adopted, it would certainly be a great convenience.

Goshen, Ind., June 25, 1883.

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Putnam County, Ind., Convention.

Mr. F. L. Dougherty gives the following report of this meeting in the Indiana *Farmer:*

We had the pleasure of meeting with the Putnam County Bee-Keepers' Association at their regular monthly meeting, on the third Saturday in June.

The meeting was called to order by President A. O. White, of Greencastle. After some preliminary work pertaining to the regular rules of the Society, the secretary, Mr. W. B. Mann, of Fillmore, read a lengthy article, which was calculated to bring on a general discussion of the many interesting points connected with the bee-keeping interest. He dwelt at some length on the mortality of bees, claiming as a whole, bees were no more liable to disease or death than anything else which the farmer might attempt to grow in connection with the mixed farming so extensively practiced at the present day. While as he said the past two or three seasons had been below the average in honey production in the central part of Indiana, the yield for the present season, to those who had not forsaken the business, would be sufficiently large to cover the entire loss of the three past seasons. The superiority of Italian bees over the black was also claimed, and the reasons why. Breeding from the best colonies, clipping the wings of the queen, its advantages and disadvantages, etc. Pending the discussion of the several questions the Society adjourned for the noon hour. At the call after dinner, the meeting was opened vigorously in the form of a question box, covering almost the entire ground, the morning questions included, all being disposed of in the regular order, calling out the different experiences of the members of the Society. The almost extinct black native bees still had friends in the Society. One thing we noticed, and to which we should like to call the special attention of the members of the Society; the lack of uniformity in hives. This is one of the most important subjects to which the Society can give its attention. Not the Langstroth hive, because we think it the best now made, but to a perfect hive of some form, and then all exactly alike. There were members present who did not know what form of hive they were using. Did not know the exact size of the frame. Could not tell what size of section would best fit the hive, etc. All of which should be understood at the start, to be able to take advantage of the instinct of the bees, to realize the best results.

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For the American Bee Journal.

Controlling Drone Production.

JAMES F. WOOD.

Doubtless many readers of the BEE JOURNAL believe that if their hives were all worker combs, they could have drones reared just where they desired, by giving the colonies drone comb. This, however, is a mistake, at least I never saw a strong colony but would rear drones; either they would tear down worker comb, and in its place substitute drone comb, or rear drones in worker cells, or around the edge of the comb. I first discovered this fact last season. Fifteen colonies of hybrids were brought into a yard of Italians, in which queen-rearing was carried on extensively; as these colonies had their combs all built on wired foundation, of course I thought no drones would be reared. True, none were reared until the hives became crowded with bees, when drones were then tucked in throughout the hive, and it became necessary to cut off their heads every few days. As we did this, we noticed more capped drones each successive time, until they so increased that five or six hundred were in each hive. This is exactly our experience this season with upwards of 50 colonies, built on wired foundation, with the exception that we let the drones hatch. If any think I am in error, I invite them to examine some of their strongest colonies, or a colony that has just cast a swarm, and they will not long be in doubt. Of course I mean one that had no drone comb in the spring.

Hoosick, N. Y., June 27, 1883.

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Local Convention Directory.

1883. *Time and Place of Meeting.*

Aug. 29.—Iowa Central, at Winterset Fair Grounds.
Z. G. Cooley, Sec. *Pro tem.*

Sept. 12-14.—Tri-State, at Toledo, Ohio.
Dr. A. B. Mason, Sec., Wagon Works, O.

Oct. 9, 10.—Northern Mich. at Sheridan, Mich.
O. R. Goodno, Sec., Carson City, Mich.

Oct. 17, 18.—Northwestern, at Chicago, Ill.
Thomas G. Newman, Sec.

Oct.—Northern Ohio, at Norfalk, O.
S. F. Newman, Sec.

Dec. 5-6, Michigan State, at Flint.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

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☞ Articles for publication must be written on a separate piece of paper from items of business.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich

Building Comb in Wired Frames.

In the Kansas *Bee-Keeper* for June, some one says I am mistaken in regard to the impracticability of wiring frames for bees to build new combs in, without the use of foundation. He says the force of circumstances caused him to try it, and it worked perfectly, the bees building the combs centrally in the frames with the wires in the septum. This settles the matter with him, of course. I do not remember of having read any one else's experience in the matter. My own experience, that which prompted my answer, is this: On several occasions the foundation has fallen down through neglect of properly securing it, when we were putting it on by hand. Not discovering the accident, the bees went on to build their combs, and, notwithstanding the combs were built between other sheets of foundation which remained in tact, in no instance did they build the comb with the septum on the wires, but the wire usually run right through the cells, and had to be withdrawn. This is all I know about the matter. Further experiments will be required to settle the matter in my mind, and probably in the minds of bee-keepers generally.

What Ailed the Bees?

I send you by this mail pieces of comb taken from two colonies which have two or three cards affected each. I wish you to answer through the BEE JOURNAL what ails them, and what is the best plan to pursue with them. The cells of these cards are filled with honey as fast as empty, instead of eggs; and upon opening them, some cells will be empty or the contents dried down. F. A. BURRILL.

Cuba, N. Y., June 29, 1883.

The comb is received. My experience with foul brood is limited to cautiously looking at, and smelling of one comb brought to our Michigan State Convention, at Battle Creek. I have always been so much afraid of it, however, that I have taken pains to "read up" that I might detect it *at once*, if it ever occurred in my apiary. I have burned your comb and box. To the best of my judgment, I feel sure that there is no foul brood of any type about your comb. I think the cause of the phenomenon you mention, is a temporary one, caused by some change in the conditions of your hive. It looks more like "chilling." I could not decide satisfactorily to myself, unless I could have more light regarding all the conditions, and perhaps not then. If it continues, with no seeming cause—to change the queen would be my advice.

Fastening Wired Foundation.

Having been unsuccessful in fastening the wired foundation in frames, please give, in the BEE JOURNAL, the best method of fastening it.

Racine, Wis. F. A. GIBSON.

ANSWER.—Nearly all feel the necessity of some device to hold the foundation true in the centre of the frame, to a certinity, and I think I am safe in saying that all of the devices known to the public at present, none equals the use of tinned wire, woven through the frames. Proceed as follows: When your frame material is out, and before nailed up, punch holes (centrally) through the top and bottom bars about 2 inches apart, and have the outside holes not further from the end bar than ½ or ¾ of an inch. For hand pressing, as I am now describing, use No. 30 tinned wire. Now sew the frame, beginning in the middle and sewing each way with each end. To fasten the ends I use a small tack, or the nails that nail the bottom bar may be left a little out. Be careful not to bow the bottom bar by drawing the wire too tight. Diagonal wires may be put on, but I do not use them, as I find no need for them. To use them, fasten one end to the nail head, and then go down through the first hole, and through the one nearest the centre of the other bar, then up through the other centre hole, and fasten this end the same as the first. Now the frame is wired. Next make a lap-board larger each way than your frame is the longest way. Now cut from ½ inch lumber a board that is ¼ inch smaller each way than the inside measure of your frame. Nail this board securely to the ⅞ lap-board, and let the grains run cross-ways of each other. This will prevent warping. With a sponge or rag wet the thin board or form. Have already cut, some sheets of foundation ⅛ less in size than your frame measures inside. Turn up about 3-16 of one edge, and (have the wax sheet warm) with a stiff, broad putty knife, or chisel, mash the turned-up portion to the top-bar (which should not be rough), so that the sheet will hang centrally in the frame. We have a rest fixed for the frame, on our work bench, to hold it while we do the mashing. Next lay the frame and foundation (foundation down) on the lap-board and over the form, and while the sheet is plastic.

Stroke the wires with the edge point of your jack knife with a drawing motion, and while this little cut will do the foundation no harm, if struck every ½ inch or so, the wire will be thus embeded into the centre of the foundation in a practical manner, and very quickly too, and so that it will stay, holding the sheet in perfect position while the bees make it into comb, which they do Given foundation in about 24 to 48 hours. There is no objection to these wires at all. Honey, pollen and brood do as well in the wired cells as any.

Is it not Contradictory?

Will Mr. Heddon please tell us what he means by saying, on page 314, of the BEE JOURNAL, that "less colonies are required to gather the honey of a given area, when they are working for extracted honey than when working for comb honey?" In the next paragraph he says: "He can get but little more extracted then comb honey." Here is a seeming inconsistency. Why should it require a much less number of colonies to a given area for extracted than for comb, if a colony can gather only a "little more" extracted then comb honey?

JOS. G. STEER.

Barnesville, O., June 25, 1883.

ANSWER.—What I meant by saying that less bees were required to gather a field when running for extracted honey rather than for comb honey, I will explain as follows: When running for comb honey, a considerable number of bees are kept at home in building comb. capping over, and ripening the honey to an extent beyond that which bee-keepers generally allow the honey to be ripened and capped when running for extracted honey. Another thing, you will notice most bee-keepers get nearly twice as many pounds of extracted as of comb honey, though this state of things ought not to be, still it is, as a rule, and I made my answer somewhat fitting to things as they are. Of course we weigh it up, sections, foundation and all, with our pounds of comb honey. Now, the difference in the number of bees required to exhaust a field, by one running for extracted honey, would depend entirely upon the skill of the producer. At all events you will see there must be a difference any way. When bee-keepers learn to estimate this business in the light of how many fields they had better occupy, and how much capital and labor it will require to exhaust the field, instead of how much surplus honey a colony of bees can gather, we shall be getting down to business and to the solid facts of apiculture.

Syrian Bees Crossed with Italians.

Please explain more fully what has already been explained (perhaps plain enough for some), but I do not fully understand it. On page 314, of the Weekly BEE JOURNAL, of the present year, there is a question asked, "What objection would there be to crossing the Holy Land bees with the pure Italians, etc.?" The answer is, "They have not the valuable qualities possessed by the Italians," but the brown Germans have. I think I have read that what is commonly called the black bee, is a German bee (of course they are a brown bee). Am I right in that? Is that the bee you mean? Do you consider the leather-colored Italians better than the bright ones, and the crossing you speak of better still, best of all? EDWARD MOORE.
Barrie, Ont., June 27, 1883.

ANSWER.—My answer regarding crossing Syrian with Italian bees, is not worded just as I meant to have it. I think it should read: "They have not the valuable qualities *not* possessed by the Italians, and which the honey-producer so much needs, but which the brown Germans have." The idea I meant to carry was this: that the excellent qualification possessed in such an exalted degree by the brown German bees, namely, rapid and perfect comb building, and white capping of the honey, is not, if I am properly informed, possessed by the Syrians. I have demonstrated that hybrids produced by crossing Germans and Italians *may be* as amiable as any bees in the world, but I doubt if such can be realized by crossing the Italian and Syrians. Regarding the two varieties of German bees, let it be understood, the brown bee is by far the most common, and is the bee possessed to a greater or less extent by those who keep "black bees." The little black bee is smaller and a more shiney black, and is a poor honey gatherer, exceedingly irascible, and when crossed with the Italian, especially the bright yellow Italian, gives us the naughty hybrid. Many black-bee apiaries (most, in fact) are made up of bees which seem to be a mixture of the brown and black Germans. Those who propose to breed crosses between the Italians and Germans, should see to it that they start with the brown German bee, entirely free from this little black blood, and straight leather-colored Italians.

SELECTIONS FROM OUR LETTER BOX

Discouraging Weather in New York.

When I last wrote we had been having three days of fair weather, so the bees were getting a little more honey than they consumed. We had one more fine day, then it commenced to rain again, and it has now rained three days. Farmers are nearly discouraged. The ground had got dry enough the four fair days, so they had just begun to cultivate their crops, and now it is soaked and water stands on the driest ground. Clover is likely to pass by without giving any surplus honey. G. M. DOOLITTLE.
Borodino, N. Y., June 28, 1883.

An Insect—Leaf Cutter.

I enclose an insect, which I found working in great numbers with my bees, upon the Mammoth Russian Sunflower. Upon examination under a common microscope, I found all of the main points visible on a bee, but on a coarser scale; the head, wings and legs seemed to be out of all proportion to the rest of the body. They possess stings which they know how to use. I watched several of them for some time, but only saw them gathering pollen, which they did in a similar manner to the bee. Please inform me through the BEE JOURNAL. 1. Their name. 2. How and where they build their nests. 3. Whether they store away honey or not. Bees are doing very poorly. M. T. HEWES.
False River, La., June 17, 1883.

[The pretty little bee is a leaf cutter, *Megachile brevis*. Unlike the hive bee and several other species, this one does not live in colonies, but each female makes and provides for her own nest. The latter is made of bits of leaves cut in circular shape, and wonderously regular and workmanlike. The nest is placed in some sheltered position, under balconies of houses, rails of fences, limbs of trees, etc. No honey is stored, the larvæ being fed on pollen. Set some of the young folks to watching the curious operations and interesting habits of this busy worker. Look for circular cuts from leaves, especially of rose bushes.—T. J. BURRILL, Champaign, Ill.]

Honey Gathering in Connecticut.

My 90 colonies and 40 nuclei keep me busy. The first swarms here were on May 18, about 10 days earlier than usual. White and red clover bloom is abundant; I never before saw so much. Bees are working strongly on both. There is a heavy basswood and sumac budding. Honey is coming in rapidly. The losses of the past winter are more than repaired, and swarms are issuing daily. Many of the early swarms are casting swarms and working in boxes too.
H. L. JEFFREY.
Washington Depot, Ct., June 30, 1883.

Rolling in the Honey.

Times have changed greatly since the 19th. We have had no rain for 12 days. My bees are just rolling in the honey, and in spite of all the sections one can pile on, they will swarm.
S. L. VAIL.
Coal Creek, Iowa, June 30, 1883.

Honey Crop a Failure in Texas.

Our honey crop, so far, is a failure. I have had bees in such condition as to surplus but once in 4 years. It will not make half a crop this season. Horsemint is in bloom, and there is plenty of it, but the weather has been so unfavorable that the flowers secreted no nectar. Every hive is full of bees, but we have no swarms (not over 5 per cent.) and no honey.
WM. R. HOWARD.
Kingston, Tex., June 29, 1883.

A Bee Killer—and a Flower.

I enclose an insect upon which I should be glad to have you give me some information. I find a great many of them, late in the evening, in my apiary, and have just discovered that they catch bees. This insect, as you see, has one in its mouth, partly eaten, and it held another in its claws, when I killed it. I also send you a bunch of flowers, with a twig from a bush that grows in my yard. The bees swarm on it all day. My bees have not swarmed much, but they have gathered a great deal of honey, filling up the combs every two or three days since April 15. It is all that I can do to take the honey from them. All the bee-keepers in this vicinity report a bountiful harvest.
W. G. MCLENDON.
Lake Village, Ark., June 20, 1883.

[The bee-killer is what is very commonly called a dragon fly, sometimes darning needle, mosquito hawk or snake feeder. The scientific name is *Eschna heros*. This is by no means the first time the large insect has been known to catch bees, though they more often capture other, and especially smaller prey. They are appropriately called mosquito hawks. In the larval or young condition the wingless, strange looking things are called water tigers. They live in the water and catch living prey in their powerful sharp-pointed jaws, which they can thrust out, by a peculiar appendage, with the rapidity and effectiveness of a steel trap. They live about a year in the water, then transform into the winged insect and continue their predaceous habits in the air. Probably they do no very serious damage to the bee colonies, yet in special cases the loss might be considerable. I do not know any effective preventive.

The shrub is known to botanists as *Myginda latifolia*, a native of our Southern States. I am not acquainted with any common name, neither do I know anything of its nectar-producing value—probably not great.—T. J. BURRILL, Champaign, Ill.]

White Clover Thicker than Ever.

I had 7 colonies of bees in the spring; most of them in common hives; but reading the BEE JOURNAL induced me to transfer 5 of them to frame hives. I have been successful, and have now 15 colonies. The white clover is thicker than ever known here. HENRY ERBRODT.

La Harpe, Ill., June 29, 1883.

Not Snow, but Clover.

The whole earth hereabouts is white with bloom, and our bees are fairly bursting with their loads of honey, as they return from the fields; and such honey, so thick, it almost stands alone, and the combs are as "white as the driven snow." I saw Prof. Hibbard at his South Bend apiary, the other day, with honey fairly dripping from his garments, and a glow of gladness all over his face. Tell Mr. Heddon to roll up his sleeves, and Mr. Doolittle to take off his overcoat. Tell all the boys to get out their honey pots, for this is the great honey year of the century. Let the horsemint State, and the Pacific Slope take back seats, and the Buckeye State will come to the front, for it is "our turn to be sweet." This sounds, I know, a good deal like buncombe, but it is nevertheless solid gold, for we are just reveling in it.

J. W. BAYARD.

Athens, O., June 28 1883.

Magnificent Clover Bloom.

It has been a very showery season, so far. We have a magnificent bloom of clover, but bees scarcely gathering a living, to date. At present it is clear, with northwest winds, which looks favorable for honey flow.

H. S. SEE.

Geneva, Pa., June 30. 1883.

My Visit to Arkansas.

I returned from Arkansas one week ago, and found my bees working nicely on white clover and the last of red raspberries. My wife had managed them very nicely; to avoid swarming she had tiered them up, and to-day the upper stories are full, and for the first time in my life, I have raised the second story and placed another under it. I have plenty of dry combs for the purpose. The honey in the upper stories is too thin to extract. While in Arkansas I met Dr. W. W. Hipolite, of De Vall's Bluff (the first wide-awake bee man I met in the State). He is very genial, but for the last year or two has had too much to do to give his personal attention to the bees; he has a son, Walter H., who is looking after the bees. I am quite taken up with the country round about De Valls Bluff, so much, so, that I think of going there to live, if all goes well. When I left them, on June 17, their bees had all done swarming, and they had commenced taking off capped honey. They have no fears of winter; their greatest difficulty is to keep swarming down to what they can handle. I have had my first swarm to-day; others will issue to-morrow, if the weather will permit. Mr. Ross has had 25 or 30 new colonies. Tiering up has prevented ours. O. R. GOODNO.

Carson City, Mich., July 1, 1883.

Honey Very Thick.

The honey season is very satisfactory here. The quality of the honey is the finest that one could imagine—so thick that it "piles" when running from the extractors. The comb honey in sections is exquisite in every respect. G. W. DEMAREE.

Christiansburg, Ky., June 29, 1883.

Recovered from Spring Dwindling.

My bees have been affected with spring dwindling, and have recovered very slowly; they are just beginning to swarm, while some are storing little honey. White clover is very abundant now. The spring has been too cold. T. N. MARQUIS.

Woodland, Ill., June 30, 1883.

Honey from Dog Fennel.

Mr. Newman, is the honey from dog fennel poisonous? I am aware that the seed will kill ducks; and it is reported to kill chickens. The honey from it is very bitter, disgustingly so, and if you like fun at others' expense, just coax them to taste some of the honey. One dose is sufficient. Two years ago, by using two extractors, I got two 5-gallon cans of the bitter honey, thinking to feed it to bees, if necessary, but had no occasion to, as they did not need it. The following season, in fruit time, in looking over honey for putting up fruit with, and tasting the honey, there was not the slightest taste of bitterness, and honey being scarce, one of my customers insisted on taking a can of it, though at a reduced price. He afterwards spoke of it as being all used up, and found nothing unpleasant about it. We used the balance in preserving our fruit. It was dark, but that really was no objection for home use. The fruit turned out well; some kept over a year, and was as good as any. No one could tell that it came from dog fennel. Of course there must have been other honey with it. Since then I have cut the dog fennel. The buckeye is in bloom, and has been now for some time. Why I wish to know about the flower being poisonous, is this: I find, during the last few days, young bees coming out of the hives to die; they do not appear to be cleaned off, and are just hatched. On opening the hives I find unsealed honey, so they do not seem to be short of stores (there is plenty sealed). The queen seems all right, and laying. The *Tione*, or bear bush, is just coming in bloom, and it may be that the honey from this does not agree with the young bees. The bees work very lively on it. The honey from it has a tart taste. I only noticed a few of the hives in that condition; the rest of them are in a normal condition. I have no disease among my bees. All the colonies are strong. I have increased from 23 in the spring to 70. All have honey enough to go through the season with. Comb honey will amount to but little with me. All I get is extracted from the brood apartment, to give the queen room, and keep down swarming. I depended on natural swarming this season, but see no advantage over dividing at the proper time; no swarms got away. Some young queens swarmed out, with full colonies. The honey crop is short, owing to continued cold rains and long spells of northerly winds, which dried up the late bloom or stopped the secretion of honey. J. D. ENAS.

Napa, Cal., June 25, 1883.

[We have never seen any honey from dog fennel, that we are aware of, and, therefore, do not know whether it is poisonous or not. If any have had honey from it, they will please report.—ED.]

A King Bird's Meal.

I send you a box by mail containing the contents taken from a king bird's crop, which I shot to-day. Please give it a microscopic examination, and see if you find worker bees or drones. I shot two, to-day, and by examining their crops, I have about concluded that they catch nothing but drones. Bees in this locality are in fine condition, and are storing surplus honey quite rapidly.

W. W. SHERWIN.

Warsaw, N. Y., July 4, 1883.

[We have examined the poor bird's meal, and find nothing but drones in it.—ED.]

Presistent Swarming.

Bees are on a big boom here. I have taken something over 5,000 pounds of honey, up to date, from 97 colonies to start with. For 12 days, when swarming was the rage, I had not a single brood frame or comb not in use, and Mr. Muth could not supply me. I was having from 6 to 12 swarms a day, and my bees in two apiaries, 1½ miles apart; had all the old queens' wings clipped. I had a black woman at the largest apiary who would catch and cage the queens when the swarms came out, and lay the cage in the portico, or in front of the hive, as many of my hives are somewhat like Mr. Heddon's, without porticos. I added sections, supers, cut out queen cells, distributed the bees around (a quart to one hive, a wash pan full to another) until I got

everything full. I kept some queens caged, just lying in the portico for a week. I am a queens' wing "clipper," henceforth. I formerly said I did not let my bees swarm. I now take it all back. Several nucleus colonies swarmed. I had to stuff them full of bees by dividing up my colonies, and they started other cells, and when the queen hatched in the cell I gave them, out they came, and in some cases, leave with a swarm, when the old mother had to stay at home. The bees are swarming now, and I must see about it.
E. DRANE.
Emenence, Ky., June 27, 1883.

Bees are Doing Well Here.

There are four times as much white clover, this year, as there has ever been in this part of the country.
HUGH MCCORMICK.
Pellsville, Ill., July 5, 1883.

Best Season for Many Years.

Bees are doing well here, this season. It is the best season that we have had for many years. There are not a great many bees in this county. Comb honey sells readily at 20 cents per pound. I am running my bees for comb honey, this season.
JOSEPH E. SHAVER—15.
North River, Va., June 29, 1883.

Too Rainy.

It has been too rainy for bees; for the last two days they are doing well, but I am afraid of more rain shortly. I have but 8,000 pounds of extracted honey up to date. I have about 600 colonies, 500 in good condition.
L. LINDSLY.
Waterloo, La., July 2, 1883.

The National Convention.

The National Bee-Keepers' Association, will hold its Annual Convention in the City Hall and Council Chamber in the city of Toronto, on Tuesday, Wednesday and Thursday, the 18th, 19th and 20th days of September, during the second week of Canada's Great Fair. All the railroads in Canada will issue tickets during this week, good to return, up to Saturday night 22d, at single fare for the round trip. Special excursion rates will be arranged from various parts of the United States, of which due notice will be given. Those who intend being present may be kept posted on the latest excursion rates, etc., by addresssng me, and also that I may arrange hotel accommodation. Private lodgings will, if possible, be secured for those who desire it, and every effort will be made to make everybody comfortable. A grand meeting is anticipated.
D. A. JONES, *President.*

☞ The bee-keepers of Hunt County, Texas, will meet at Dr. Wm. R. Howard's apiary, on the 19th of July, for the purpose of permanently organizing a County Association.
WM. R. HOWARD.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1 year, for the Weekly, with **$4**, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with **$6**, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For four subscribers, with **$8**, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with **$10**, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

Special Notice.—We will, hereafter, supply the Weekly BEE JOURNAL for one year, and the seventh edition of Prof. Cook's Manual of the Apiary, bound in fine cloth, for **$2.75**, or the Monthly Bee Journal, and the Manual in cloth for $1.75. As this offer will soon be withdrawn, those who desire it should send for the book *at once.*

How to Create a Market for Honey.

We have now published another edition of the pamphlet on "Honey as Food and Medicine," with more *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy **5** cents, postpaid; per dozen, **50** cents; per hundred, **$3.00**. On orders of **100** or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit. Try it, and you will be surprised.

How to Advertise Judiciously.

This is what Robert Bonner, the New York publisher, and one of the most extensive advertisers in the country, has to say on the very interesting subject of advertising. Its application is general enough to cover the entire field:

"One of the points of good advertising, is to address the same people over and over again. For instance: Suppose you were introduced, with about 500 others, to the President, the chances are that the President would not remember you. But if you had an opportunity of seeing him again, and said, 'Mr. President, I am Charles Wolsey, of Brooklyn; Senator So-and-so did me the honor of introducing me to you,' and you did this two or three times, you would be sure to be remembered. In the same way an advertisement presented once is forgotten, while one presented over and over again makes an impression."

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies	(120 pages)......	$1 00
" 100 colonies	(220 pages)......	1 50
" 200 colonies	(420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

☞ Do not send coins in a letter. It is dangerous and increases the postage unnecessarily. Always send postage stamps, for fractions of a dollar, and, if you can get them—*one-cent* stamps; if not, any denomination of postage stamps will do.

Bingham Smoker Corner.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent post-paid for **$1.75.** Address,

BINGHAM & HETHERINGTON,
Abronia Mich.

All Excelling. — Messrs. Bingham & Hetherington, Dear Sirs:—I am now selling your Smokers almost exclusively. You are excelling yourselves in smokers all the time.
Respectfully, J. G. TAYLOR.
Austin, Texas, May 10, 1883.

Cyprians Conquered.

All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's "Conqueror Smoker" did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham.
G. M. DOOLITTLE.
Borodino, N. Y., Aug. 15, 1882.

During the following three months, Bingham Smokers will be sent postpaid, per mail, on receipt of the following prices:

The "Doctor"..	(wide shield)—3½	in. fire tube,	$2.00
The Conqueror	(wide shield)—3	in. fire tube,	1.75
Large............	(wide shield)—2½	in. fire tube,	1.50
Extra............	(wide shield)—2	in. fire tube,	1.25
Plain............	(nar. shield)—2	in. fire tube,	1.00
Little Wonder..	(nar. shield)—1¾	in. fire tube,	.65
Bingham & Hetherington Uncapping Knife..			1.15

With thanks for letters of encouragement, and the absence of complaining ones, we tender to our thirty-five thousand patrons our best wishes.
Very Respectfully Yours,
BINGHAM & HETHERINGTON.
Abronia, Mich., June 1, 1883.

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

Queens! Queens! Queens!

We are now prepared to send you by return mail the handsomest and best Queens, bred from our best honey-gathering strains of ITALIANS and ALBINOS. Purity and safe arrival guaranteed.

Tested queens,		................each......	$ 2.00
Warranted queens,		..........each......	1.00
"	"	.......per ½ doz...	5.50
"	"	........per 1 doz...	10.00
Untested	"	..........each......	.90
"	"	.......per ½ doz....	5.00
"	"	........per 1 doz....	9.00

If you want Queens for BUSINESS, send us an order. We are breeding from an entirely new strain this season, which bids fair to outstrip anything we have ever had before for honey. Address,

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The Oldest Queen Breeders in America.

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110 square feet or 10 lbs. for $7.00. In strips 5x15 to 30 inches long. Less than 10 lbs., 74 cts. per lb. Cut any size. **H. W GARRETT,**
COEYMAN'S HOLLOW, Albany Co., N. Y.

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Twenty-five lbs. or less, 55c. per lb.; over 25 lbs. 52c per lb. Extra thin and bright (10 sq. ft. to the lb.) 58c. Wax worked for 10c. per pound.
24A5t **F. W. HOLMES,** Coopersville, Mich.

HONEY. I wish it distinctly understood that I will not accept shipments of HONEY unless bought by me by previous correspondence.

A. H. NEWMAN, 923 W. Madison, St., Chicago.

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THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published monthly, and contains the best practical information for the time being, showing what to do, and when and how to do it. **Rev. H. R. PEEL, Editor.**

We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal*, both for $3.00 a year.

BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN.

Editor of the Weekly Bee Journal.

925 West Madison Street, Chicago, Ill.

It contains 160 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey Bee, and at the same time produce the most honey in its best and most attractive condition.

Appreciative Notices.

A neat and abundantly illustrated hand-book of apiculture.—American Agriculturist, N. Y.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Tenn.

Contains all the information needed to make bee-culture successful.—Eagle, Union City, Ind.

Just such a work as should be in the hands of every beginner with bees.—News, Keithsburg, Ill.

Valuable for all who are interested in the care and management of bees.—Dem., Allegan, Mich.

Engravings are fine. Gotten up in the best style, and is cheap at the price.—Farmer Cleveland, O.

Carefully prepared for beginners.—Farmers' Cabinet, Amherst, N. H.

A very valuable work to those engaged in bee-raising.—News, Prairie City, Iowa.

We advise all who keep bees to send for this excellent work.—Journal, Louisiana, Mo.

Carefully prepared, and of vast importance to bee-raisers.—Indianian, Clinton, Ind.

New and valuable, and embellished with 109 beautiful engravings.—Democrat, Salem, Ind.

Much practical useful information, in a cheap form.—Daily Standard, New Bedford, Mass.

The most perfect work for the price ever yet produced on the subject of bee-culture.—Anti-Monopolist, Lebanon, Mo.

A manual, containing all the newest discoveries in the management of these little workers.—Plain Dealer, St. Lawrence, N. Y.

Full of practical instruction, that no one who contemplates keeping bees can do without.—Farmers' Journal, Louisville, Ky.

It comprises all that is necessary for successful bee-culture, save experience and good judgment. —Daily Republican, Utica, N. Y.

Gives minute details for the management and manipulations necessary to make bee-keeping a success.—Col. Valley and Farm.

Written in an interesting and attractive manner, and contains valuable information for all readers, even though they be not directly interested in the care of bees.—Sentinel, Rome, N. Y.

It embraces every subject that can interest the beginner in bee-culture. The engravings perfectly illustrate the text.—Farm and Fireside, Springfield, O.

Embraces every subject of interest in the apiary, giving very thorough details of the management and manipulations necessary to make bee-keeping a success.—Farm, Longmont, Colo.

It is a valuable and practical book, and contains a complete resume of the natural history of the little busy bee, as well as of all that one needs to know in their care and management.—Chicago Herald.

Contains a vast fund of information in regard to bee-culture. He who would keep abreast of the times must keep posted in all the improvements in his line We advise all interested to get a copy of this book.—Daily Times, San Bernardino, Cal.

Describes all the newest discoveries in the art, by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive shape.—Signal, Napoleon, O.

It embraces every subject that will interest the beginner. It describes all the newest discoveries in the art by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive form. It is embellished with beautiful engravings, and is the most perfect work of the kind, for the price, that has ever come under our notice.—Farmer, Lancaster, Pa.

PRICE—Bound in cloth, **75 cents;** in paper covers, **50 cents,** postpaid.

THOMAS G. NEWMAN,
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OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1881

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THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

Bee-Keepers' Week!

This sounds rather new and somewhat *novel*. Perhaps it is not yet set down in the Calendar, to be observed as a *feast*, but it is to be observed at the great Southern Exposition at Louisville, Ky., as we see by the Louisville *Courier-Journal* of July 8, a copy of which has been sent to us by Mr. W. Hamilton, of that city, with this paragraph marked :

> While every day during the Exposition, from Aug. 1 until the closing, will be full of the most interesting features, certain days have been set apart for special attractions, which will be of direct interest to a large number of people. The programme on the opening day will be very elaborate ; business throughout the city will be suspended during the day, and the Exposition will be opened by the President of the United States. On Tuesday, Aug. 28, begins a week to be known as Bee-Keepers' Week and Horticultural Week. Prizes will be awarded, and arrangements have been made by the Kentucky Bee Association to have many hives of many kinds of bees within the grounds.

The Kentucky apiarists are evidently at work in the right direction, and we would encourage them by every means in our power to make thorough work of it. It will be remembered that President Demaree issued a card to bee-keepers, which we published on page 339 of the BEE JOURNAL for July 4, and we would here call especial attention to it.

Every bee-keeper within a reasonable distance of the Exposition, whether in Kentucky, Indiana, Ohio, Illinois, Missouri, Arkansas or Tennessee, should see to it that there is a grand display of bees and honey, and everything to be made of honey, and that the "Bee-Keepers' Week" may be made notorious by the magnitude of its exhibit. There will be plenty of honey. This is "a year of plenty," the like of which has not been known for a very long time! Let the *display* then be commensurate with the honey harvest, and it will advertise the honey crop far and wide, and cause a corresponding demand for the sweet product.

When that 180 tons of comb honey was sent to England, and was displayed like a huge mountain at the "British Agricultural Fair," with the words "AMERICAN HONEY" painted in large letters on canvas at its top, with American flags arranged in graceful folds on each of its sides, the people of that "beautiful garden spot," opened their eyes and gazed with admiration! The result was that ton after ton of it was quickly sold, and it graced the tables of Her Majesty, Queen Victoria, and aristocracy and nobility vied with each other in appropriating its sweetness, being captivated by its beauty and the magnitude of its display. It is safe to assert that now the demand for honey in Great Britain is ten fold greater than ever it was before that display was made, and year by year this demand increases. Why may not this teach us a lesson? for the Bee and Honey shows of Europe now *lead* us, both in their magnitude and educational results.

The year 1883 will long be remembered as America's Great Honey Year, let it also be recorded as the year of its Grand Honey Shows—the Year of Jubilee for the thousands who are being poisoned by the glucose frauds and adulterated sweets.

Let the "Bee-Keepers' Week" inaugurate a new era—when "Feasts" may be spread at hundreds of Fairs, all over the country, inviting all mankind to come and partake of God-given sweets, distilled in Nature's own laboratory, and gathered under heaven's smiles by the "blessed bees," both for man's sustenance as food, and for its health-giving properties as medicines.

Let the invitation be given to all—Let the apiarist and exhibitor say, Come! Let him that heareth say, Come! and whosoever will, let him Come, and partake of the Honey Feast—it will create a sweet disposition, and produce a bright intellect!

The Balsams as Honey Producers.

Dr. L. Knorr, Savanna, Ga., has sent us a copy of the Rhode Island *Wochenblatt* of June 16, in which it is stated that in Germany they are very enthusiastic about a new honey-producer—the giant balsam—and that it is being cultivated extensively near Berlin for the bees to work on. The balsams of America yield honey, but we do not think they are as good honey-producers as many others. Mr. A. A. Fradenburg stated at the National Convention held in Cincinnati, Ohio, in 1880, that he had cultivated them for that purpose, and they yielded honey well.

The balsam poplar, and the variety known as "balm of gilead" yield propolis also, in good quantities.

Labors of the Bee.—As a sample of the labors of the bee in gathering honey, an exchange remarks as follows :

> The bee has long been a type of the industrious worker, but there are few people who know how much labor the sweet hoard of the hive represents. Each head of clover contains about 60 distinct flower tubes, each of which contains a portion of sugar not exceeding the five-hundreth part of a grain. The proboscis of the bee must, therefore, be inserted into 500 clover tubes before one grain of sugar can be obtained. There are 7,000 grains in a pound, and, as honey contains three-fourths of its weight of dry sugar, each pound of honey represents 2,500,000 clover tubes sucked by bees.

Bee and Honey Show in London.

The London *Journal of Horticulture*, speaking of the annual exhibition of the Bee-Keepers' Association, to be held July 5 to 9, 1883, says:

The date of the show has been fixed nearly a month earlier than usual, in order to give those who are staying in London for the season an opportunity of visiting this interesting and instructive exhibition; no better date could have been selected. The present season has been one of the best on record for the production of early honey, the warm sunshine of the past few weeks tending to the secretion of honey, and large quantities have been gathered by the bees from the fruit blossoms, early clover, and other sources. Unusually large entries have been made in the honey classes, and the present exhibition will fully illustrate the advantages to be derived from keeping bees in an intelligent and humane manner.

The old-fashioned bee-keeper who lets his bees look after themselves until the months of August or September, and then "takes 'em up," consigning the industrious bees to the brimstone pit, will look on with wonder and astonishment at the great display of comb honey in one and two-pound sections, and extracted honey in neatly labelled glass jars, the whole of which has been secured by the third week in June, or even earlier in some districts. The exhibition will contain an interesting collection of bees confined in observatory hives. No bees will be at large; the most timid may, therefore, visit the show in perfect safety. No pains have been spared by the committee to make the proceedings of a thoroughly interesting character. Practical instruction in the art of bee-keeping will be given at intervals on each day, the modern methods of managing bees during the spring, summer, and winter months being fully explained by the most advanced bee-masters. Special addresses will be given by Frank R. Cheshire, Esq., on Saturday, July 7, on "Structure of the bee in relation to fertilization," and on Monday, July 9, on "Bees as hybridizers and fruit-producers, or the dependence of orchard crops upon bees." These addresses will be given at 4 p. m. each day.

☞ The new two cent rate of postage for letters goes into effect on October 1. Three cent postage stamps will then be but little used. For all fractions of a dollar sent to us hereafter we should prefer either *one-cent*, or else five or ten-cent postage stamps. Do not send coins in any letter.

☞ Do not let your numbers of the BEE JOURNAL for 1883 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

Swarms Selecting a Location.

In proof that the bees do select a place in advance, by sending out "scouts," Mr. Geo. Yeomans, Shedfield, England, gives the following in the *British Bee Journal:*

In an outhouse, hid under trees and amidst other buildings, I had a few days ago put a number of old straw skeps, one of which contained old comb. Seeing the bees visiting this house, I put the old hive with the comb near the window, and on the next day, June 8, a swarm took possession of it.

☞ The *Grange Bulletin* says: "One of our patrons has taken 220 pounds of nice extracted honey from 6 colonies of bees in one day; and still they have all their combs returned and are refilling them with a fresh supply." This is only a small straw—but "straws show which way the wind blows."

☞ The White County, Arkansas Fair will be held at Judsonia, Oct. 10 to 12, 1883, as we are informed by Mr. C. M. Forbes, the secretary. We hope that a good exhibition of honey will be made by the bee-keepers of that section.

Rough on Vermont.

We have sung the praises of old Vermont for many a year, but this rather disheartens us. Editor Cheever of the *New England Farmer*, has just been buying "pure Vermont maple sugar," and finds it to be chiefly glucose. We did not suppose that Chicago influences had extended so far and so rapidly. We have known Vermont farmers who put a false 2 inch birch plank bottom inside their butter tubs; one who accidently let drop a 2 pound brook cobblestone into the firkin as the butter was being packed; of one whose "artful wicked" hired man put water in the milk can before starting for the cheese factory; of one whose "hired girl" carelessly turned over the salt box upon the butter worker; of another who forgot and skimmed the milk before sending it to the factory; but that the old State of Ethan Allan, Brigham Young, W. Pitt Kellogg and Stephen A. Douglass should put glucose into its sugar is too much for us. If Vermont maple sugar is to be diluted at home, the world is about done for. Vermonters, shame on you.—*Farmers' Review.*

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

The National Convention.

The National Bee-Keepers' Association, will hold its Annual Convention in the City Hall and Council Chamber in the city of Toronto, on Tuesday, Wednesday and Thursday, the 18th, 19th and 20th days of September, during the second week of Canada's Great Fair. All the railroads in Canada will issue tickets during this week, good to return, up to Saturday night 22d, at single fare for the round trip. Special excursion rates will be arranged from various parts of the United States, of which due notice will be given. Those who intend being present may be kept posted on the latest excursion rates, etc., by addresssng me, and also that I may arrange hotel accommodation. Private lodgings will, if possible, be secured for those who desire it, and every effort will be made to make everybody comfortable. A grand meeting is anticipated.

D. A. JONES, *President.*

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., July 16, 1883.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—Extract. honey has commenced to come in freely, and a large crop is reported from all quarters. The demand is very good, and keeps pace with the arrivals. For choice extracted honey I pay 7@10c; the latter price for choice clover. I have received several nice lots of comb honey, for which we paid 15@16c on arrival.

BEESWAX.—Arrivals of beeswax are plentiful. We pay 32c. for a good article on arrival.

CHAS. F. MUTH.

NEW YORK.

HONEY.—Best clover in 1-lb. sections (no glass) 20@21c.; in 2-lb. sections (glassed) 18@20c. Fair quality, 1 and 2-lb. sections, 16@17c Extracted, white, in small barrels, 10@11c.; buckwheat, 8@8½c.

BEESWAX.—Is more plentiful. Prime yellow sells at 36½c.

H. K. & F. B. THURBER & CO.

CHICAGO.

HONEY.—The demand for extracted is good, and the market bare of all unfermented honey. Prices range from 8c. to 10c. Comb remains lifeless and will until the new crop comes, or until August. Sales of comb are being made at 8c. to 15c.

BEESWAX—30@35c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY.—New extracted is arriving freely—selling for 7 and 8 cts. New comb coming forward slowly; extra white, 16c.

BEESWAX.—No beeswax in the markot.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Some new comb jobbing at 14c, but old do. nominal. Only a few barrels of extracted and strained sold within quotations—6½@7½c.

BEESWAX — Sold irregularly from 32@34c—mainly at 32@33c.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY.—There is a moderate sale for best white 1-lb. sections at 18c, occasionally 19c, but 2 lbs. are not called for. Extracted has no sale at all.

BEESWAX—Not offering.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—Our supply is gone; we have none to quote.

CROCKER & BLAKE, 57 Chatham Street.

CORRESPONDENCE

For the American Bee Journal.

A Word of Explanation.

G. M. DOOLITTLE.

By No. 26, of Bee Journal, which is just at hand, I see that the editor thinks I got things a little mixed when I wrote on the "Langstroth frame." I plead guilty to being a poor penman, and, perhaps, was rather unhappy in my expressions, which, together with some errors of the typo, does make the article found on page 318, read somewhat curiously. However, I think the careful reader will see by the last paragraph, taken in connection with the explanation regarding frames in the forepart of the article, what was meant. Perhaps I should have said a frame 11¼x11¼ every time when I used the words "Gallup frame," and a frame 17⅝x9⅛ when I spoke of what A. I. Root calls the "standard Langstroth frame," but I feared using so many figures would tend to confuse, and so fell into a worse blunder, perhaps, by using the vernacular of nearly all who write on the subject. In short, I wished to say just this: That nearly all the frames in use in America to-day were Langstroth frames, and that I wished to express my gratitude to L. L. Langstroth for giving us a practical frame; that from the present outlook I did not believe it possible to make any one frame a standard, no matter how desirable, and that nearly all the frames now before the public were practically good enough; that it was particularly noticeable that those desiring a standard frame were using a frame 17⅝x9⅛, while those using frames of other dimensions were satisfied to let others use whatever frame they desired. Again, that because Doolittle, using a frame 11¼x11¼, had been surpassed as to yields of honey by "lots" using the 17⅝x9⅛ frame, while L. C. Root, using a frame 19⅛x11, had surpassed the "lots," did not help Mr. Porter any in concluding that a frame 17⅝x9⅛ was the best of any, and that it should be adopted by all; that because Doolittle, using a frame 11¼x11¼, winters bees poorly, while a certain man, using a frame 19⅛x11, winters his bees every time, does not help Mr. Pond's assertion that a frame 17⅝x9⅛ is the best for wintering. Lastly, that the *pushing* of a frame 17⅝x9⅛ by A. I. Root, in *Gleanings*, and the preference shown by the editor of the Bee Journal for said size of frame, was what had caused it to be used more largely than all others (if such was the case), rather than that it was more meritorious than other forms of the Langstroth frames; that had Prof. Cook edited *Gleanings*, and L. C. Root the Bee Journal, and been as *strenuous* for their respective size of frames as had A. I. Root for what he terms the Langstroth (17⅝x9⅛), we should have seen a different state of affairs.

In conclusion, that I was "willing that *every* one (not "*any* one," as the typo has it) should use a frame 17⅝x9⅛ if they so desire, but I would like the advocates of such a frame to let the people know the whole truth regarding what caused the state of affairs which now exist.

Borodino, N. Y.

[Of course, we well knew what Mr. D. *meant*, but in a friendly way called attention to his unfortunate manner of expressing it. Now it is quite explicit.—Ed.]

For the American Bee Journal.

Southwestern Iowa Convention.

The Southwestern Iowa Bee-Keepers' Association, met at McPherin Bros. law office, Clarinda, Iowa, June 21, 1883. A number of members were present. Prof. J. L. Strong was in the chair.

Mr. E. Kretchmer gave a short address, and exhibited the following implements: Simplicity hive honey knife and smoker.

Mr. Strong exhibited comb foundation and Bingham smoker.

Many questions were then propounded and answered, after which an election for officers was held, which resulted as follows: President, J. L. Strong; Secretary, R. C. Aiken; and 8 new members were enrolled.

It was voted to hold the next meeting at Red Oak, Iowa, on May 29, on the fair grounds—that being the second day of the fair.

Each member was requested to take such apiarian implements as he may have, and place them on exhibition at the fair. R. C. Aiken, *Sec.*

J. L. Strong, *Pres.*

American Apiculturist.

Honey Bees and Horticulture.

PROF. A. J. COOK.

"If some of our fruit-growers were to write upon this subject, they would place as the title—Bees *versus* Horticulture. Some of our ablest entomologists are persuaded that bees do not always play the *role* of friends to the pomologist.

What I am to say of bees would apply equally well, in some cases, to many other sweet-loving insects, as the wild bees, the wasps, and many of the dipterous, or two-winged flies; only as early in the season other insects are rare, while the honey bees, though less numerous than they are later in the season, are comparatively abundant, even early in the spring months.

My first proposition is, that plants only secrete nectar that they may attract insects. And why this need of insect visits? It is that they may serve as "marriage priests" in the work of fertilizing the plants. As is well known, many plants, like the willows and the chestnuts, are diœcious. The male element, the pollen, and the female element, the ovules, are on different plants, and so the plants are absolutely dependent upon insects for fertilization. The pollen attracts the insects to the staminate flowers, while the nectar entices them to visit the pistillate bloom. Some varieties of the strawberries are so nearly diœcious that this luscious fruit, of which good old Isaac Walton wrote, "Doubtless God might have made a better fruit than the strawberry, but doubtless God never did," would in case of some varieties be barren except for the kindly ministrations of insects. Other plants are monœcious—that is, stamens and pistils are on the same flower, but the structural peculiarities are such that unless insects were wooed by the coveted nectar, fertilization would be impossible. Many of the plants with irregular flowers, like the Orchids, as Darwin has so admirably shown, are thus entirely dependent upon insects to effect fructification. In many of these plants the structural modifications, which insure fertilization consequent upon the visits of insects, are wonderfully interesting. These have been dwelt upon at length by Darwin, Gray, Beal and others, and I will forbear to discuss them further.

But many of our flowers, which are so arranged that the pollen falls easily upon the sigma, like the clovers, squashes, and fruit blossoms, fail of full fruitage unless, forsooth, some insect bear the pollen of one flower to the pistil of another. As has been repeatedly demonstrated, if our fruit bloom or that of any of our cucurbitaceous plants be screened from insects the yield of seed and fruit will be but very partial. Prof. Beal and our students have tried some very interesting experiments of this kind with the red clover. All of the plants under observation were covered with gauze that the conditions might be uniform. Bumble bees were placed under the screens of half of these plants. The insects commenced at once to visit and sip nectar from the clover blossoms. In the fall the seeds of all the plants were counted, and those from the plants visited by the bumble bees were to those gathered from the plants which were shielded from all insect visits, as 236 : 5. Thus we see why the first crop of red clover is barren of seed, while the second crop, which comes of bloom visited freely by bumble bees, whose long tongues can reach down to the nectar at the bottom of the long flower tubes, is prolific of seed. This fact led to the importation of bumble bees from England to New Zealand and Australia two years since. There were no bumble bees in Australia and adjacent islands, and the red clover was found impotent to produce seed. When we have introduced *Apis-dorsata* into our American apiaries, or when we have developed *Apis-Americana*, with a tongue like that of Bombus, seven-sixteenths of an inch long, then we shall be able to raise seed from the first crop of red clover, as the honey bees, unlike the bumble bees, will be numerous enough early in the season to perform the necessary fertilization. Alsike clover, a hybrid between the white and the red, has shorter flower tubes, which makes it a favorite with our honey bees, and so it gives a full crop of seed from the early blossoms.

In all these cases we have proof that Nature objects to close inter-breeding; and thus, through her laws, the nectar-secreting organs have been evolved, that insects might do the work of cross-fertilization. As in the case of animals, the bi-sexual or diœcious plants have been evolved from the hermaphroditic as a higher type; each sex being independent, more vital force can be expended on the sexual elements, and so the individual is the gainer.

It is sometimes contended by farmers that the visits of bees are detrimental to their crops. I have heard farmers say that they had known bees to destroy entirely their crop of buckwheat by injuring the blossoms. There is no basis of fact for this statement or opinion. Usually bees visit buckwheat bloom freely. If for any reason the seed fail, as from climatic condition and influence, it occasionally will, the bees are charged with the damage, though their whole work, as shown above, has been beneficial, and that only.

It is true, as I have personally observed, that species of our carpenter bees (*Xylocopa*) do pierce the flower tubes of the wild bergamont, and some of our cultivated flowers, with similar long corolla tubes, that they may gain access to the otherwise inaccessible nectar; the tubes once pierced and our honey bees avail themselves of the opportunity to secure some of the nectar. I have watched long and carefully, but never saw the honey bee making the incisions. As I have never heard of any one else who has seen them, I feel free to say that it is entirely unlikely that they are ever thus engaged.

My last proposition is, that though bees, in the dearth of nectar secretion, will sip the juices from crushed grapes and other similar fruits, they rarely ever, I think never, do so unless Nature, some other insect, or some higher animal, has first broken the skin. I have given to bees crushed grapes from which they would eagerly sip the juices, while other sound grapes on the same stem —even those like the Delaware, with tenderest skin, which were made to replace the bruised ones—were left entirely undisturbed. I have even shut bees up in an empty hive with grapes, which latter were safe, even though surrounded by so many hungry mouths. I have tried even a more crucial test, and have stopped the entrance of the hive with grapes, and yet the grapes were uninjured.

In most cases where bees disturb grapes, some bird or wasp has opened the door to such mischief by previously piercing the skin. Occasionally there is a year when an entire vineyard seems to be sucked dry by bees in a few hours. In such cases the fruit is always very ripe, the weather very hot, and the atmosphere very damp; when it is altogether probable that the juice oozes from fine natural pores, and so lures the bees on to this Bacchanalian feast. I have never had an opportunity to prove this to be true, but from numerous reports I think it the solution of those dreaded onslaughts which have so often brouht down severe denunciations upon the bees, and as bitter curses upon their owners.

Lansing, Mich.

For the American Bee Journal.

Essentials of the Coming Hive.

W. H. STEWART.

What to us appears to-day to be true, may to-morrow prove to be untrue. The assemblage of what we now consider to be general principles, deduced from experiment and observation on the subject of bee-culture, may, by some, be considered entitled to the name of pure science. No science is pure, however, unless based upon self-evident truths, as is the science of mathematics. I sometimes question whether the art of bee-culture has become sufficiently understood to be properly called a science.

If we say that two and two equal four, or that four pecks equal one bushel, we speak self-evident truths, backed up by pure mathematical science; but if we ask how many cubic inches are contained in a Wisconsin or New York bee hive, we find that no scientific or positive answer can be given. The reason that no answer can be given is, that no one has as yet been able to demonstrate practically that any one hive in use embodies all the advantages that are found in all the hives of various forms and sizes that are now or have been in use. Even if a hive could be shown to embody all the good points that are found in the many others, there is no certainty that it would not be found wanting in some respects.

The truth is that not a State in the Union has a hive that gives universal and full satisfaction to all bee-keepers in that State. A hive adequate to every demand of both bees and bee-keepers, every day of the year, and every year, would possess in itself self-evidence that it was constructed on pure scientific principles. When we get that kind of a hive, then every bee-keeper will be as well satisfied of its perfection as they now are that 2 and 2 equal 4, from the fact that that very application of the principle will demonstrate its truthfulness.

The Langstroth hive being shallow, the supers are nearer to the centre of the cluster of bees, and thus many conclude that the bees can be induced to work in the supers earlier in the season than in taller hives. Let us admit that this be true, and that we have thus gained one important point. We find on the other hand that the queen is much more apt to extend the breeding into the super than where tall brood-chambers are used. Also, that very little honey can be stored above the cluster for wintering, and this latter objection alone renders it altogether unfit for out-door wintering.

If bees are in a tall and reasonably narrow hive, then nearly, or all their winter stores are found in the upper part of the hive, and during a long cold spell, the bees can easily, and do naturally move slowly upward to the top of the cluster to meet the warmer air, and are ever coming in connection with the lower portion of their stores, and can obtain plenty of food without being compelled to make any unnatural or hazardous movement. In low broad hives the stores must unavoidably be at the sides of the cluster, and when we have such a winter as the past, when for 50 to 100 days that bees could not leave the cluster, either downward or in a laterly direction without being chilled to death, they consume what is immediately above them, and then perish with hunger with plenty of food within a few inches of them on all sides.

It is my opinion that the main reason why bees wintered better in the old straw hive is, that on account of its peculiar pyramidal form, the most and best of the stores were in the upper part of the hive, and also, the hive being contracted on all sides alike, the warmer air was confied to the same point, and the bees could easily move about in the midst of plenty.

If a chaff hive could be invented that would embody this point, and the advantages for supers and movabls combs in the brood-chamber, as found in the Langstroth, then we might, with propriety, talk about wintering on the summer stands; but broad, shallow brood-chambers with movable combs, either in chaff or straw, will ever fail as an out-door winter hive. Tall, narrow hives like the American, give bees a chance to store honey above the cluster to a greater extent than other frame hives in use; but the open spaces between the combs at the ends allows the warm air to escape laterally, and become disipated throughout the hive, thus reducing the temperature in and immediately about the cluster. They are also unsafe for wintering on summer stands.

Again, many bee-keepers are of the opinion that the hive should be contracted in early spring, and are experimenting with various division-boards for that purpose. And then again, all the frame hives of which I have any knowledge are, in the months of June and July, found too small to give a prolific queen ample room for brooding. During the two last seasons, I have found hybrid queens using 18 and 20 combs, and each comb 12x12 inches.

Many are now talking of using perforated separators over the brood-chamber to confine the queen to the lower combs for the purpose of keeping the surplus free from brood. This proposition proves that the hives thus provided is considered to be incapable of satisfying the queen in the lower department in the height of the brooding season. And yet again, if it should finally be found most convenient and profitable to winter in-doors, it is in such case most convenient to set the hives on top of each other, thus building up a wall of hives around the room, and at the same time it is often desirable to have the hive so constructed that we could handle any one, in providing for them without disturbing others immediately connected with the one being handled.

What shall we do? Shall we have a hive that embodies all desirable points, or will we plod along losing in winter what we can save in summer? Do not say that it cannot be done, but let each one strive to develop at least one good point. It seems that if other creatures can have a home that is adequate to all their wants, why not the honey bee?

A perfect hive must embody many good points, and we cannot expect to accomplish all in one day, or year perhaps, but we may proximate, and in doing so let us ever bear in mind that the following points must not be over-looked:

1. The brood-chamber must be easily adjusted to the size of the colony and wants of the queen at all seasons of the year.

2. It must be so that winter stores will be mostly in the upper portion of the hive, and above the cluster.

3. There must be ample top surface in summer for supers.

4. It should be adapted to out-door wintering if possible.

5. It should be constructed so that the bees can be handled at any time of the year.

6. Let the hive be not too complicated or expensive, but cheap, simple and compact.

Let each give their best thoughts through the AMERICAN BEE JOURNAL, and let the only strife be for the perfection of the coming hive, and ultimate success of bee-culture.

Orion, Wis.

For the American Bee Journal.

The Standard Frame.

W. H. HARMER.

I am much obliged to Mr. Hutchinson for his article on page 308; I am glad to hear of anybody adopting the Langstroth hive, and also to Mr. Heddon for his, on the next page. The want of a standard frame I am sure is felt by every busy honey-producer. I used to think the same as Mr. Hutchinson in regard to the necessity of the frame holding eight 4¼x4¼ sections, but I have got over that. I believe the Langstroth frame to be long enough, and that broad frames for sections will soon be a thing of the past. I think Mr. Hutchinson would say so too, if he ever used the Heddon section rack. It seems to me there is unnecessary wood and work about the broad frame system, and it is not nearly so easy to manipulate, as the rack above mentioned. We must come down to a point where there is only the necessary handling, if we want to turn those silver-lined clouds to a golden hue.

I have used a deeper and shorter frame before I took to the Langstroth; and to take a deeper one now would make me feel as if I was going backwards. I will here quote two lines out of "Langstroth on the Honey-bee," page 330: "The deeper the frame the more difficult it is to make them hang true on the rabbets, and the greater the difficulty of handling them without crushing the bees or breaking the combs."

Let every beginner make a note of this, for it is one of the points on which successful bee-culture rest, and one that troubled me ever since I saw the first movable frame, until the joyous news came of the wiring process; whoever the inventor is, he will always have my heart-felt thanks.

It stands to reason that we ought not to play leap-frog with our frames of bees and brood, if we have not got perfectly straight combs. I can tolerate no others in my apiary, and to get them so, they must be wired. But to return to the subject, I think there is room in the Langstroth hive for a frame two-eighths of an inch longer if any one wished to produce comb honey in that way. I should like to say a good deal more on the subject, but I am a very slow writer, besides I do not wish to take up too much valuable space. I think Mr. Hurst will find a very good answer, in the above, to his question in the last number of the BEE JOURNAL.

Manistee, Mich., July 6, 1883.

For the American Bee Journal.

Do Queens Not Mate More than Once?

S. HINMAN.

Is it regarded as an established fact that queen bees mate with the drones only once? Prof. A. J. Cook says, on page 310 of the BEE JOURNAL, that Mr. Alley is surely right in saying that queens mate only once. My experience with queens leads me to think that there are exceptions to the rule.

In 1880, I commenced to Italianize my apiary by purchasing an Italian queen from D. A. Jones. I introduced her successfully to a queenless colony of black bees on July 7; on Aug. 27, I succeeded in introducing a young queen, reared from the brood of the Jones queen in another colony of black bees. This hive I looked into very often, in order to see how the daughter of the Jones queen was coming on. In due time, the eggs, larvæ and sealed brood made their appearance in the hive. On Sept. 24, as I looked into the hive, I saw most unmistakable signs on the queen of having mated with a drone that very day. At the same time there were eggs and brood in all stages, and sealed brood on the same frame with the queen. I think there can be no doubt about its being the same queen that I introduced on Aug. 27, as there was no unfertilized Italian queen in my yard, that could have usurped her place in the hive, and outside of my yard there was not an Italian colony within five miles of my place.

Dundonald, Ont.

Prairie Farmer.

Extracting Honey from tne Combs.

MRS. L. HARRISON.

Many more pounds of honey can be secured by the free use of an extractor than if comb honey is the object. Especially is this true when there is only now and then a good day. An extractor is a desideratum in every apiary, although we prefer to produce comb honey. Many colonies that would not produce a pound of comb honey would yield considerable extracted.

There has been considerable discussion among bee-keepers as to the proper time when honey should be "swung." Some claim that it should be sealed, and well ripened, while others aver that it saves time and honey to extract before sealing, and that the honey is just as good, provided it is kept in a hot, dry atmosphere until it has evaporated to the proper consistency. A prominent apiarist of this State, who runs his bees for extracted honey only, tiers up his hives until the season closes before extracting.

This extracting business is not always smooth sailing. A lady once told the writer that a neighboring bee-keeper brought his machine to their house and extracted their honey. When he was through, everything in the house was sticky; the kitchen floor was covered with wax and propolis, and the bees cross as hornets; when the honey was brought in, they "came also." The key-holes in the doors had to be stopped, and when the bees found they could not enter, they hung in a big cluster from the door-knobs. She emphatically declared that she had enough of it to last her her lifetime. "Why, if I picked up the dish rag there were bees on it, and I got stung, or if I touched the handle of the dipper or the broom, it was the same thing. Whew! But the funniest part of it was when my old man drew on his books in the morning the day after extracting. He is always complaining of the rheumatism, and being so stiff that he can hardly move; but when his foot went down into that boot, he jumped clear over a chair with a yell like an 'Injun.' You see the bees had clustered inside, near the top, and, as he pulled it on, he brushed them down into it, and, as they got pinched, they stung lively."

The extracting should be done in a building by itself, or in a tent inaccessible to the bees. The building should have a revolving window, so that the bees inside could be turned outside. The tools necessary are uncapping knives, an extractor, and an uncapping can. This can has a wire strainer part way down, and is a great convenience, for the honey drains through into the can below, which is drawn off through a gate. Some bee-keepers have a box with folding covers, which has two handles or shafts, before and behind, so that it can be borne by two persons in carrying in the honey to be extracted. This box is filled with empty comb and carried to a hive, when the bees are driven from the combs with smoke from a bellows smoker, and the remainder brushed off with a feather, or asparagus tops, as they are taken out, and their places filled with empty comb. Others have a similar box for carrying combs, fitted on to a wheelbarrow, and those who extract on a small scale have a tin bucket with a cover, suitable for carrying 5 Langstroth frames.

A very sharp knife is necessary to remove the cappings so that the comb may be marred as little as possible. Honey can be extracted from combs containing brood, but it is seldom done. If the brood is uncapped, the machine has to be turned gently, or it will be thrown out. We do not want "grub juice" in our honey, so we let these combs alone. It is not necessary to strain the honey unless the operator desires it, though we always do, as all bits of comb rise to the top.

When white clover honey is extracted neatly and kept by itself, it is one of the purest sweets known. It is one of the best known remedies for coughs and colds—a boon for consumption and persons of weak digestion. When Mrs. L. L. Langstroth was thought to be dying with consumption, she commenced taking pure honey, a teaspoonful at a time, as often as possible. She recovered and lived 10 years, dying of some other disease. "Eat thou honey, because it is good."

Peoria, Ill.

For the American Bee Journal.

Bee-Moth, its Depredations.

THOMAS BALCOMB.

There seems to be a considerable amount unsettled in regard to the theory of the bee-moth. I have noticed more than once many conflicting theories; notwithstanding the "so-called" pest, is but a small enemy to the advanced apiarist, yet it is as well that something more definite should be arrived at. I find that a vast number entertain the idea that the moth must enter the hive and deposit its eggs over the combs to propagate its species. Others think the moth lays its eggs on and around the alighting board; and many, with myself, think that the bees unconsciously carry the eggs into the hive, while gathering the pollen from the various plants.

I find much difference of opinion as to what the moth or worm wholly subsists on. Dr. Howard, in the Texas Bee-Keepers' Convention, said that the so-called bee-moth subsisted "wholly" upon honey comb, as constructed by the bees; that comb foundation made from pure wax was not attacked; that comb constructed from such, was only infested for the sake of the additional comb; he said that Judge Andrews called his attention to this a year ago, in a remark that the moth larvæ cannot subsist upon *pure beeswax*.

Now, I certainly beg to differ from these gentlemen's views upon the subject; for I am fully convinced that the moth and its worm do subsist on substances other than beeswax. I have noticed that the moth seems more plentiful in the fall of the year, particularly if it has been wet and sultry weather. It does not seem feasible that this super-abundance of the moth could have had their beginning inside of a bee hive, and wholly upon "honey comb." I think (and Dr. Howard's statements partly bear me out) that the moth eggs are not only deposited in the cells with the pollen, but the eggs are "worked up" by the bees in manipulating the wax for cell building. That is the reason why the natural comb is more infested by them.

I presume Judge Andrews had reference to pure beeswax that had been "melted down," when stating that the moth larvæ could not subsist on pure beeswax. But I have more than once found that, to a limited extent, the moth grub will even subsist on pure melted wax. I think the small square I have sent you, Mr. Editor, for examination, is as pure as wax can be, yet you see it is partly eaten up. I have had dark (melted) wax badly eaten when kept with pieces of old comb, and neglected.

Mr. M. D. Davis, at the same convention, asked if these worms could subsist upon bee bread. My experience has been that the worms mostly originate in the pollen. I find after consuming the pollen, they then attack the wax. The piece of comb that I have sent for examination was drawn out, last year, from moulded foundation; a few bees were reared on one side, as you perceive. This year I put the comb into a hive and the bees commenced putting in pollen where the brood had been; but, having to double up some, I took out the comb and put it with some others, in an empty hive, to experiment with, and the result is that in a few days the worms have hatched out in that freshly-deposited pollen, and they are subsisting "wholly" upon that, but will commence on the comb whenever the pollen is consumed.

Whether the worms, when in hives, attack the bee larvæ, I cannot positively say, but I believe that they will even subsist and thrive on a diet partly of bee larvæ. For, last year, I unfortunately had to make some experiments that were rather costly. I had let fall into a shapeless mass two frames of solid brood (excepting a little honey and pollen); they had just been drawn out on moulded foundation. I, therefore, put them into a clean coal-oil can, securely tieing cloths over the top, so that no small insects, much less a bee moth, could enter, but in a few days I could detect the worm, and watched their gradual progress, but in less than two months it was one mass of moth worms and webs.

Now, in the first place, the combs were quite new and had their first "batch" of brood; they came from the centre of a strong colony of Italians, where I know that neither moth worm or anything else would be tolerated, but all was entirely eaten up, and I know, without a doubt, that no moth ever touched those combs. Therefore, I have long ago been forced to believe that comb and bees are seldom distroyed by the moth itself entering the hive; but that the eggs are deposited in the honey and pollen-producing plants and flowers, and are carried in by the bees themselves.

Furthermore, I fully believe that the moth will thrive and multiply on substances and in places other than the wax, and the home of the honey-bee. I hope for the benefit of those that are in such dread of the moth worm, that my brother bee-keepers will not let this subject drop, for I think it quite essential tnat we should have a thorough knowledge of the enemies of the honey-bee, as well as of the industrious little fellows themselves.

Luling, Texas.

[The cake of wax and piece of comb mentioned by Mr. Balcomb bear unmistakable evidence of being pure wax, and yet it is infested with the moth and partly eaten up.—Ed.]

Read before the Texas Convention.

Different Races of Honey Bees.

W. K. MARSHALL.

The modern improvements in the management of the honey-bee has led to the inquiry whether the bee itself cannot be improved. Hence, we have been looking after an improved or superior race of bees.

Every species of the honey-bee may probably be embraced in two general classes: the yellow and the black bee. The different varieties are probably crosses of these two races. It is generally supposed that there are two varieties of the black bee; a vicious little fellow, but a good worker, and a large light-colored bee. I have never been able to see the reason for this distinction, and have thought that the difference was owing to the management and other circumstances. I have found that the larger lighter-colored bee produced the most honey, even before aided with the modern improvements. I think the black bees are all of the same race, and not much difference in their temper or honey-producing qualities.

The yellow bee appears to be a distinct species, both from its marking and temperament. It probably originated in Egypt, and spread from there to the Holy Land. The Egyptian, and bees from all the surrounding regions, are so nearly the same in markings and temperament as to point to them as the same race; climate and method of management have made the difference in their habits and appearance. The Italian bee I consider an importation from the bee of Palestine. Their markings are nearly alike; their habits and temperment are the result of climate and management. Of all the different races of bees, already subjected to our improved modes of management, I consider the Italian the most desirable. I have found the Holy Land and Cyprian bees prolific and good workers, but cross, easily disturbed, nervous and hard to manage. For practical purposes, at least for the present, I would not advise an extensive cultivation of them. The light-colored Italians, with three yellow bands, clearly marked, are certainly the purer stock. The dark-colored Italians with the yellow bands narrower and not so clearly marked, undoubtedly have been tinctured with the black blood. This probably comes from contact with the German bee. The question whether this taint of black blood has not produced a superior bee for practical purposes is still an open question. My experience with the dark-colored Italian bees, gave me a very high opinion of their merits. I had a dark-colored imported queen, whose progeny were the most docile and the best workers I ever had. They were certainly not pure, for while they generally were all marked with the three bands, occasionally there was among them a sport, pointing look to the black blood. Undoubtedly the light-colored clearly-marked three-banded Italians are the pure stock, and the ones we should breed from. If a tincture of black blood is desirable, it can easily be obtained.

As to the question which is the best bee for practical purposes, I answer, so far as has yet been demonstrated, the Italian. They may probably be improved, and "the coming bee" may not yet be developed. Undoubtedly the bee, to some extent at least, is subject to the same laws which govern the whole animal world. By selecting the higher grades, and breeding up, we may reach a degree of perfection not yet obtained.

I would recommend the light-colored bee to breed from, until "the coming bee" has arrived, and when a greater degree of perfection has been reached, we can then take the higher grade and keep it up to the degree of perfection already obtained.

As the question is, Which will pay best, this or that, and all things considered? I can make the Italian pay best. I select it in preference to any already in the field. Nor have I yet seen any improvements which very materially beats the original Italian. I think I have seen home-bred queens which fully equaled any of the imported, but I have never seen any mingling of blood, thence I am very much disposed to stick to the pure Italian, unadulterated.

Marshall, Texas.

For the American Bee Journal.

Securing Straight Combs.

C. HARROLD.

In answer to the inquiry of J. Hurst, on page 338 of the BEE JOURNAL, I would say: Take a long-bladed knife and pass it down between two of the outside combs, as best you can, removing one comb; this gives you room. Now if the next frame has a comb partially extending across 3 or 4 others, gently pass the knife between the comb and bottom bars, then along up the end, to the top bars, then back to the second frame again, holding the comb up with the hand; now press the comb straight, and if it is too long for the frame, pass the knife through the comb, leaving it long enough for the frame; press it in the frame, and fasten it to the top bar by pressing it with the thumb. If the comb contains honey, cut out the ill-shaped end and extract it; then place it in the frame as before described. The knife should be wet in clean soap-suds directly before using each time, and so continue until the combs are all straight.

First plumb your hive (it does no harm to pitch them a little to the front, so that the bees may drag out the cappings while at work). If foundation is not used, you can take small bits of comb, and wax them to the top bar with the thumb, 3 or 4 bits on every frame. Whenever the bees commence building their combs crooked, straighten them and change the frames, so that the bees are compelled to build it straight. You can probably turn the frame, end for end, with less work, and it may answer all purposes. I think, if you turn your frames every 3 or 4 days, you will have no trouble.

Onawa, Iowa.

Translated from Bienenfreund by A. R. Kohnke.

Dzierzon's Theory of Wintering Bees.

N. N.

At last Dr. Dzierzon has written an extensive article in defence of his theory that "bees during their winter rest could not be housed too warm, and if it were possible, they would be much better off in a temperature ranging from 75 to 95 degrees F., than anything below that."

All bee-keepers are agreed that success in wintering is the foundation of success in bee-keeping, and a further discussion of this question would advance the interest in bee-keeping largely, by showing that well and warmly-protected bees should winter better, and also to show the fallacy of those bee-keepers who, contrary to this theory, have found it more advantageous to their bees and themselves to give them less protective and more ventilation.

It may be quite interesting to hear of the experience of a bee-keeper from the North (58 lat.) who casts his vote in favor of "cold" wintering (little protection), and *why* the reasons Dr. Dzierzon advances to support his theory, have not been acceptable to him. A "cold" wintering would certainly show its disadvantages, if it were such, in a cold climate, much colder than Germany. The writer of this article has now for 4 years wintered his bees with little protection from cold (which last winter lasted 6½ months), and never lost a single colony. No dysentery, no moldy combs, few dead bees, and the excrements and other dirt on the bottom board as dry as powder. Most, or at least very many of the bee-keepers in Germany follow the teaching of their master, and, according to his theory, have their bees well housed and protected. In spite of this I noticed:

1. Poor wintering in Germany and other countries during hard winters.

2. Continual complaints about poor wintering, in bee papers.

3. The complaint that colonies in frame hives winter much poorer than those in box hives, gums, or straw hives, contrary to Krasicki's assertion of the opposite being the fact.

4. That even Dr. Dzierzon and Berlepsch corroborated them as being disadvantages of the frame hive.

5. That the writer of this article has had the very best of success by adopting the opposite course.

6. That the bees in the Northern and Eastern part of Russia, being confined 8 months to their hives winter very successfully.

7. Hilbert's opinion, that "though we owe Berlepsch very much, his wintering theory has caused bee-keepers great losses," especially by two of his doctrines, that 1st, bees need very little air during wintering, and 2nd, should "be most carefully guarded against ventilation."

And finally, 8th, on seeing bees wintered in his neighborhood by a lady bee-keeper, after the old style, in gums standing in the garden in a very exposed position and expressing his surprise about it, she smilingly replied: "These animals are not afraid of any cold." The walls of these gums are no thicker than 1½ inches. She only once lost one colony on account of cold, because the walls of the gum were very thin. It has also been observed that bees packed or housed always winter poorly, and the knowing ones never protect them in this country.

Dr. Dzierzon uses repeatedly the expression: "A bee is no ice bear (white bear)." Certainly not; for within the Arctic zone we find no bees; a single bee is a helpless, delicate creature. But a colony of bees is like a bear, and where a bear winters, there a colony of bees will. This is proven many times over, but it requires a strong colony, and only strong colonies should be considered in discussing theory of wintering. Weak colonies are diseased colonies, and must necessarily be treated as a patient, wrapped up well in cotton, and belong more appropriately to apistical pathology than in the wintering question.

It seems to me that Dr. Dzierzon reasons in a question, requiring practical experience, from assumed but not proven facts. This reasoning from such has led him into error, as is proven by the experience of many other bee-keepers, whose observation corroborate the contrary of his assertions. The writer has wintered his bees successfully without any protection, with two openings in the hive; one at the bottom and another half way up the hive, and that in a temperature of from 30° to 40° below zero, and the bees having wholly been confined to their hives in different years for 6, 7 and 8 months. It would be an easy matter for any bee-keeper to try to winter a colony in a temperature of say 70° or 80° by putting an observation hive in a window in his room, where the temperature does not fall below the heat required by Dr. Dzierzon. It would be interesting to know his verdict in this question; by such decisive experiments the science of bee-keeping would gain largely.

Remark by the Translator.—I obtained, this spring, a colony of bees from a frame in an old rotten box-hive; as it had no legs, which were, perhaps, rotten some years ago, it was propped up and nailed to two posts, about one foot from the ground; the bottom board was entirely gone, exposing the combs to view. On top were two open inch holes not at all covered; it had always wintered well; had stood there for many years, and swarmed occasionally, but never had it given any surplus honey. On transferring it to a Langstroth hive, I found plenty of bees and brood and two capped queen-cells.

For the American Bee Journal.

Wintering Bees.

JAMES HEDDON.

As an excuse for coming forward again with this old, old subject, I will say that it is not yet exhausted.

Loss in wintering is considered by many the arch enemy of the bee-keeper. I am just one year late or behind the time I expected with this article. In the fall of 1881, I prepared a large number of colonies in very many different ways, wishing to somewhat test the effects of different conditions upon the main cause of loss in wintering, namely dysentery. The open winter following, which gave the bees a chance to void every two or three weeks, which we all know to be a prevention or cure or both to the malady, prevented my experiments from teaching one any thing upon the subject.

Last fall I repeated my previous experimental packing for winter, and as you know, was favored by a winter long enough, and strong enough to satisfy the most entusiastic truth seeker. As I have much else to say, I will not go into a detailed description of my modes of wintering. I will give you my own deductions in as short a space as possible.

These experiments verified my former opinion that cold and confinement is not the main cause of dysentery. I do not remember the time when my bees were confined longer or subjected to longer extended low temperature than last winter. There has not been a time since I kept bees, except one winter when I had 33 colonies, that dysentery has not shown itself among the bees to a greater or less extent. One year I lost 60 colonies out of 73, another 45 out of 48, another year near two-thirds, another about three-fourths, and once or twice one-half. Once (with the 33 colonies above referred to) all came through in perfect order. If cold and confinement were the cause of dysentery (dysentery being the well known cause of our winter losses) of my 350 colonies put into winter quarters last fall according to the above experience, I should not have had 5 colonies left alive. As it was I lost a little over 150 colones out of 350. Many colonies came through in perfect condition.

My favorite experiment was made with 50 colonies, 45 of which came through in good condition with the exception of 3 or 4 which had fertile workers, being overlooked during my absence in the fall, caused by severe poisoning from breathing the odor of bees at that time of year. My own experiments are not alone in proving that cold and confinement are not the cause of dysentery, but only one of the necessary conditions; as a temperature above the freezing point is a necessary condition for yellow fever, though heat is not the cause of it. On page 218, of the current volume, Mr. D. L. Herrick, of Vermont, says that Mr. McKay wishes to know if any one can beat 130 days without a flight, and says he can. Says his bees had been confined 159 days, and the whole 21 colonies answered the roll call, all seeming in perfect condition on April 15.

Many reports like this can be found to back up my opinion. I have demonstrated to my own satisfaction that upward ventilation, downward ventilation, dry atmosphere, damp atmosphere, and many minor conditions only act for or against the great cause in a mild degree, and then much according to the condition of the bees. I am now perfectly satisfied, though I admit there is still room to be mistaken, that the cause of dysentery lies in the food eaten by the bees, and I firmly believe that what is known as "Heddon's pollen theory," gives the correct solution to the subject.

I will quote the following from a private letter from that able apiarist and careful student of nature, Mr. A. R. Kohnke, of Youngstown, O.: "There are only two substances in the hive for the bees to eat, namely honey and pollen. We know honey is a pure carbon sweet, at least practically so, and if eaten in small quantities by bees, is converted into carbonic acid and water, hence leaves no residue. But pollen contains a much larger per cent. of undigestible matter which has to be voided as feces; it must, therefore, be the pollen. That is what you say. It is pollen first and last. Now hold on; not so fast. During the winter the bees have nothing to do but to sit still and breathe, not breed. To breed, they need and must have pollen; but to breathe they need not. I want to know why they should eat pollen when they do not need it. An answer, a correct answer will bring us to a true and correct starting point. Could you bring about such a condition with bees as would force them to eat honey when they want pollen, or pollen when they want honey? Will bees of their own choice eat the one when they are in need of the other? You may, perhaps, say you do not know, but I rather think you do. Bees are not yet enough civilized to accept substitutes of one for the other, "and make it do." They do not. They will not touch your pollen if they have honey or some other pure hydro carbon sweet within reach. If they have not, they eat not only the honey but the pollen also, of which a large part is covered with honey, and then the accumulation of feces begins. If at this stage the weather permits a flight, they will improve the chance and then move around to honey, and no dysentery will be visible, if not it is there."

It seems that this letter of Mr. Kohnke's is meant by him as a partial controversy with me, while the facts are, it precisely substantiates my favorite opinions and claims. I have said all along that bees unhesitatingly prefer honey if the quality is good, but do not eat pollen except when they are out of normal condition, by the honey being all eaten out of their immediate cluster, and the weather too disastrously cold for the bees to move. Or when breeding begins, I think the bees, in handling the pollen, swallow more or less of it, for some way or other breeding and dysentery keep company to a great extent.

Very many bee-keepers, who are now observing and experimenting somewhat regarding the pollen theory, are writing me that they believe it a correct one. Among them, Mr. Walter Harmer, of Manistee, Mich., writes as follows: "Two colonies came through all right; the only one that had dysentery, had an excess of pollen, and began to breed the earliest. Now, I wish to quote from a gentleman who has experimented, perhaps, more than any other living man upon this question, namely, the consumption of pollen as connected with dysentery. I refer to Dr. A. B. Mason, of Wagon Works, Ohio. In a letter under date of March 20, last, he writes as follows:

"I've just been reading the *Exchange* for February, and I notice Mr. Tennant's remarks on your pollen theory; he does not believe that pollen alone is the cause of dysentery, etc.; I had to laugh. A good many illustrations popped into my head, and the first that occurred was, that I would be laughed at too if I was to say that, when a man is hung for murder, the rope around his neck was not not the cause of his death—his getting his neck into the rope is the cause of death; so of course, pollen is not the cause, it is 'cold weather without purifying flights.' I wonder what do bees want 'purifying flights' for, if they do not eat impure food? I like to read occasionally what Mr. Cheshire says on page 277, of the BEE JOURNAL for June, 1879.

"As I wrote you, once before, I have wintered for 4 years without pollen, and without loss, but this winter I am experimenting, not for choice but necessity, and I am going to pay for it, too. Being partially paralyzed in my wrists, for several weeks last fall, I was unable to prepare all my colonies for winter without pollen. I put 77 colonies in the cellar (where I have wintered them 2 years without loss), last Nov. 18, in a pile, 13 hives long and 6 hives high, without any regard to their condition, only putting the heaviest in stores at the bottom, having previously marked every one with pollen, and its location in the hive. Now for the result, so far. The colonies with pollen nearly all have dysentery, and those having the most pollen in the cluster, have it the worst. Perhaps you will say, how do you know this? Well, last week we had two days, nice and warm, and I took most of the colonies with dysentery out for examination and a flight, and found as above stated. All were clean inside, aside from dead bees; no daubed combs. I shall lose from 'spring dwindling.' You go 10 to 1 on the pollen theory (it is no longer theory with me), but I can beat you on that, for I say 100 to 1, and more too, in practice. You notice that nearly all who give directions for wintering say, 'plenty of good honey, or sugar surup;' why don't they say, 'and pollen,' if it is a good thing to have in winter. Some of my dysenteric colonies have eaten the honey and left the pollen, and show but slight signs of dysentery."

From all of the above, I form the following conclusions:

1. Dysentery is the cause of our winter losses, to which all other losses are "as water unto wine."

2. The consumption of bee bread, or perhaps floating pollen in the honey, during the period in which the bees cannot void the residue necessarily accumulating from it, is the cause of dysentery.

It now only remains to devise some off-hand practical method, not a complicated and cumberous one, or one which subjects one to stings or robbing, with which to put up bees, in such shape for winter as will avoid the conditions which are productive of dysentery.

These points I am working at, and when it is all accomplished, it will be time to announce our success, and the "what and how" of it, when I have made such success positive and permanent.

Dowagiac, Mich.

Gleanings in Bee-Culture.

Observations on Several Topics.

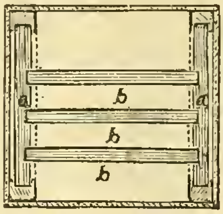
L. L. LANGSTROTH.

On page 55 of my work, you will see that I noticed in 1852 (as I see from my journal, and not 1854), drones reared under the same circumstances, so frequently referred to by some of your contributors. If the spermatic filaments of the drone remain sometime upon the surface of the egg, it is easy to conceive that the bees can remove them before they get into the micropyle of the egg, and hence drones instead of workers.

I wish to make some suggestions for the improvement of your standard chaff hive. You will remember, that years a ago you asked for some practical way by which the frames could be inserted in the top story so that it would not be necessary to remove them all in order to get access to those below. I think that this can be done, not only without injury to the main features of your hive, but with an increase of storage room above for frames or sections, besides other advantages.

Let me begin by saying that the doubling the case of the upper story is not only unnecessary for the protection of the bees below, but a positive injury to them, in the winter at least, by making that upper story like a damp cellar, and preventing it from drying out as it always does when made of a single thickness. This is one reason why the chaff cushions in your hive are so often damp, when in those I have made, they are comparatively dry. Let your top story be made of single thickness, and you not only get rid of this evil, but have much more storage room, either for frames or sections. Not only so, but you gain just the room which you need for easy instead of cramped access to the lower story. There is good room for your arms, for want of which, even when there are no frames to remove from the upper story, I always dislike to manipulate with your hives, especially if there is much work to be done.

Suppose, now, that you have all the room which would be gained by a single thickness of the walls of that story. I will show you how to arrange that space for frames, by a simple plan which I used very successfully more than 15 years ago. My upper stories were made of only ½-inch stuff, and were strengthened by four posts, screwed one into each corner. These posts did not come up level with the sides of the cover, but were kept just enough below to allow frames to rest upon them (*a*, *a*), a little below the frames which sit from front to rear in the upper story (*b*, *b*, *b*). To sustain these frames, thin rails of hard wood, about 3 inches wide, with upper edges beveled to a sharp edge, were fastened up against the corner posts. The dotted lines represent these rails. You will see that the space in front and rear of the upper frames was utilized for holding storing frames, which also prevented the bees from building combs between the upper set of frames and the front and rear walls of the upper case of the top story. In the hives I used, in order not to use frames resting on the corners, of a different size from the standard Langstroth frame, the lower story was made to hold 13 frames, in a brood-chamber 18⅛x18⅓, instead of 18⅛x14⅛; but there will be no need of your chaff hives holding more than 10 below. By using smaller frames than the standard Langstroth, or dummies instead of frames, any standard Langstroth hive might be made on this plan.



If you wish to get access to any frame below you need only remove one or two above, moving some of the others nearer together, and there is nothing to prevent you from lifting out the lower frame, the rails on which the upper ones rest being no hindrance at all.

In this way you avoid all the heavy lifting, and other trouble incidental to the plan of the old two-storied hive, when you desire to get access to the lower story. If you still, for any reason, desire to have the upper walls of your chaff hive double, you can avail yourself of this plan, by making the air space very narrow; but in my opinion the hive is much better if single thickness above.

There was a time when I would have tried to patent this plan; but while I neither question the absolute right of any inventor to patent any original patentable device, nor the absolute wrong of parties who knowingly infringe upon valid patents, as a matter of plain business common sense, I would advise against patenting devices which can so easily be appropriated by others, as almost every thing connected with bee-culture must necessarily be. Where the manufacturing of any patented article requires costly buildings and machinery, and heavy capital, men will think long and often before they attempt to infringe upon it; for in their costly plant they give ample guarantees to those who will defend their rights. On the contrary, if a man could invent the most useful article that human brains ever devised, but which could be easily and cheaply made by almost any one; in order to reap any substantial benefit from his patent, he must expect, as the rule, to engage in almost endless litigation, and to spend one fortune in trying to make another. I hope that you will make at least one chaff hive on the plan I have suggested, and put it to the test of actual use in your apiary.

Last year, in this place, at this time, the weather was most propitious, and the fields and roadsides white with clover; but it had no perceptible fragrance, and the bees in my neighbors' apiaries had to be fed to be kept from starvation! This year, notwithstanding the frequent and drenching rains, our houses are sweet with the smell of clover; and in the intervals when they can work, the bees are accumulating stores at a great rate.

Oxford, O., June, 1883.

Local Convention Directory.

1883. *Time and Place of Meeting.*

Aug. 29.—Iowa Central, at Winterset Fair Grounds.
Z. G. Cooley, Sec. *Pro tem.*

Sept. 12-14.—Tri-State, at Toledo, Ohio.
Dr. A. B. Mason, Sec., Wagon Works, O.

Oct. 9, 10.—Northern Mich. at Sheridan, Mich.
O. R. Goodno, Sec., Carson City, Mich.

Oct. 17, 18.—Northwestern, at Chicago, Ill.
Thomas G. Newman, Sec.

Oct.—Northern Ohio, at Norfalk, O.
S. F. Newman, Sec.

Dec. 5-6, Michigan State, at Flint.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich

Comb Production.

Will Mr. Jas. Heddon please tell us if it will pay to feed extracted honey, costing 10 or 11 cents per pound to get comb, to sell at 20 cents? Our honey season is over till fall; if this plan will pay, I can keep my bees at work during honey dearth.

D. W. BELLEMEY.

Vienna, Ill., July 8, 1883.

ANSWER.—A few say that it will. Very many say they have found that it will not, and have paid for the lesson. If you will try it this season, I will venture to say you will be found among those who fail to make it practical. I have not believed it practical, hence, have not tried the experiment.

Transferring.

In answer to Silas R., on Transferring, on page 315, Mr. Heddon says: "We practice transferring either on the old system or the new." Please give us both systems in the next number of the JOURNAL, and oblige several subscribers who wish to know for our own benefit. Give us light on this subject.

D. F. MARRS.

South Bosque, Tex., June 27, 1883.

ANSWER.—I will have an article on Transferring next week, in which I will give and compare both systems.

What is the Cause of It?

Please answer these questions in "What and How" department:

1. When a virgin queen leads a swarm, does she mate with the drone while swarming?

2. What is the cause of bees, where they are on the outside front of hive, having a back-and-forth motion, heads downward, mandibles against the hive, like as if they were rubbing them against the hive?

3. When I open a hive and am lifting out frames, on some frames several bees will begin to shake themselves like as if they were trying to shake loose from their legs—what is the cause?

J. A. P. FANCHER—34.

Fanchers' Mills, Tenn., July 9, 1883.

ANSWERS.—1. No; such is not the rule, though I do not know that such might not happen under some conditions. As a rule, the age of the queen forbids.

2. I once found out the cause of this see-saw movement, but have forgotten it, and who told me, as it is not radically connected with our success or failure.

3. I have been told that this shaking motion is to remove particles of pollen that still adhere to the legs, but I have always been too busy with the dollar and cent points of the business, to stop and carefully look into these unimportant matters. They are of most importance to the apicultural entomologist, and I presume Prof. Cook can answer these questions easily and satisfactorally.

SELECTIONS FROM OUR LETTER BOX

Horsemint a Failure.

Our main honey plant, the horsemint, failed to yield honey this year, on the account of drouth. Last year it beat anything I ever saw; my bees filled their hives in 3 weeks; it bloomed about 8 weeks, yielding all the time. I have to feed some of my bees now, to keep up breeding. For the fall plant, we have the smart weed; I notice thousands of it springing up all around the lakes, and it never fails to yield honey. I will now name some of the Texas honey plants: First, fruit bloom, then willow, youpon, rattan, persimmon, hoarhound, horsemint, wild ivy, elder, dog fennel, wild sage, smart weed, native cotton, and a hundred other different varieties which yield more or less. Please tell me how to make winter feed, and how much it will take to winter a colony.

W. S. DOUGLASS.

Lexington, Tex., June 28, 1883.

[For feeding in fall for winter stores, 3 pounds of coffee A sugar and one pint of boiling water, simmer five minutes. Feed this inside the hive with a division board feeder, or in a tin can with a coarse cloth tied over it, and inverted on the frames. For fall feeding, estimate the amount required, and give it as fast as the bees can store it in the combs. For winter feeding, use four parts coffee A sugar and one part water; simmer till it becomes quite hard on being cooled, mould into frames of one inch thickness, and lay it on top of the frames, using sticks underneath one-half inch square; or mould it in brood frames, tie hemp twine around to hold it in place, and put it in the center of the brood chamber. Each colony should have 30 pounds of *good* honey for winter stores, in the North, but in Texas, it needs much less.—ED.]

Lots of Honey.

I have just arrived home from San Antonio, Texas. Bees are doing nothing there at present; the weather is so very dry. Wilt return there again in the fall. Bees are doing finely here, swarming right along, laying up lots of honey.

A. C. BAILEY.

Brooklyn, Iowa, July 9, 1883.

Bees Doing First Rate.

I am building a new bee house 16x20 and 16 feet high. I am going more extensive in the bee business. Bees are doing first rate. The linden has not commenced to bloom yet, in my locality. I had a small swarm queenless, on the first of June. I gave it two queen-cells; one of the queens hatched, got fertilized and laid eggs in worker comb in three days; all this time the other queen was not allowed to hatch, and the eighth day after the first queen hatched, they swarmed.

REESE POWELL.

Mineral Point, Wis., July 10, 1883.

Sourwood Honey.

This season I have been trying Prof. A. J. Cook's plan for the prevention of increase, by putting swarms into colonies that had swarmed a few days previously, giving supers filled with foundation, after destroying all queen cells, and they invariably swarmed again in from 10 to 13 days, but now they have stopped since July 5. Sourwood began to bloom on June 26, and is now booming; the honey is very thin—clear as crystal, and, when fully ripened and thick (which takes till about Sept. 1), it is, to my taste, the finest honey of any. It has the most delicate flavor, never cloying the appetite like some honey does. After ripening in the hive, it turns to a pale yellow and is very thick. The sourwood will continue in blossom till the last of July. Bees do not gather honey as rapidly from it as they do from poplar, but the sourwood holds its own longer, and we get more surplus from sourwood, when the season is favorable, the bees being always strong when it is in blossom. Our ridges here are covered with it, not exclusively, but mixed among the oaks and other trees.

J. A. P. FANCHER.

Fancher's Mills, Tenn., July 9, 1883.

Mistaken Economy.

With all respect to Mr. Doolittle, I would say that he gave, sometime ago, what looked well on paper, and I thought I had "struck ile" when I read it, which was to save foundation by hiving bees on empty frames for a few days, then to add foundation. I have tried it, and found it mistaken economy, if foundation can be had. I have proved that bees often swarm without being able to produce much wax for 48 hours. Some of my bees did good work at once on foundation, by raising the cell walls without being idle or producing wax at the expense of honey. If bees hang out a few days and prepare for swarming, they will give much better results on empty frames. Next, when I saw my stock of foundation costing $50, I began to wonder if it would pay. I used half sheets, to see if I could not sell some foundation. I guess not, for about 12 in the dozen were filled out with drone comb below the half sheets, especially if put in before swarming. No more half sheets on these premises. To get strong, well puffed out combs, keep the extractor away until all are well drawn. I let my bees swarm naturally, and put them on full sheets of un-wired foundation (sometimes a pail full of bees), and have yet to see the first sheet to fall when put on as you recommend. This is the wettest summer known in this part, but we have a large crop of clover and thistles, also, I think, about 5,000 basswood blossoms to one last year; they may not be out till July 20. I am surprised at so much being said on wintering bees, and of those having cellars, giving reports as soon as they are carried out. How bees pull through the spring, after being cellared; this is the grand point. I kept my outside boxes on many colonies until June, and still had losses in the spring. But my neighbor has only a handful in one hive, out of 27 kept in a good cellar. They had not even started egg-laying when set out, and could not stand the spring dwindling, while mine will be doubled in a few days, by natural swarming, if we get a honey shower equal to the appearance of basswood. Your pamphlets on "Honey, as Food and Medicine," ought to be scattered lively. I think bee-keepers would consult their own interest to use them.

CHARLES MITCHELL.
Molesworth, Ont., July 9, 1883.

Honey a Failure in Alabama.

Last season was an entire failure, and the present one bids fair to be partly so. Poplar did not yield its usual quantity of honey this year, and it was nearly all used up in rearing brood, and putting the bees in good strength for work. About the 20th of June the linden commenced to open its bloom, but yielded very little honey until the last 10 days. We have not, as yet, taken off an average of 5 lbs. of honey per colony, while other years we would have taken 40 lbs. We may get a yield of late honey.

NELSON PERKINS.
Princeton, Ala., July 10, 1883.

Basswood Honey Next.

Bees are doing fairly this season, though they are slacking up now. Basswood will be in blossom in about a week, and then I am in hopes they will go ahead again. Last year there was no honey to speak of here, and a large proportion of the bees starved to death.

A. C. BALCH.
Kalamazoo, Mich., July 7, 1883.

Finest Honey Ever Seen.

Bees are booming here. Some of my first swarms have swarmed three times. I never saw such a bloom of white clover, and the honey is the finest I ever saw. Bees are very numerous here now, and the question is, what will be the result if this honey flow shall continue? Italian bees for me, every time.

J. G. NORTON.
Macomb, Ill., July 11, 1883.

Large Crop of Honey.

Those who have attended to their bees in southern Ohio, have had a large crop of honey this year.

J. S. HOFFMAN.
Madisonville, Ohio, July 10, 1883.

Drone Cells.

On page 347 Mr. Wood speaks of drone brood on worker foundation. I have never had but a trifle of that work, but now the bees are changing worker to drone cells in a few small places on some of our combs. We must, in justice, admit that all worker foundation will not *entirely* control the "where and when" of drone production; but with me it does it the first year, and controls more than nine-tenths of it ever after.

Dowagiac, Mich. JAMES HEDDON.

Honey Without Separators.

Mr. L. C. Whiting says, on page 320, present volume, that he had 700 pounds of honey stored in sections without the use of separators, and 100 pounds of the honey was so bulged that it could not be crated. Will Mr. Whiting please explain whether the sections were 2 inches instead of 1¾ inches wide; also, were the sections placed in broad frames or in crate or rack?

GEO. H. DENMAN.
Pittsford, Mich., July 7, 1883.

An Excellent Market.

My bees were very weak in the spring, but now are strong, and are bringing in the honey fast, when it does not rain; it has rained a part of the day almost every day for 2 or 3 weeks. I have about 50 colonies, and they are swarming some, and getting ready for the linden, which will come here about July 25. I sell all the white honey I can get by the 100 pounds in bulk, for 15 cents per pound. This is as good a market as I want.

A. GRIFFES.
Mount Bridges, Ont., July 9, 1883.

Special Notices.

☞ Articles for publication must be written on a separate piece of paper from items of business.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

☞ Do not send coins in a letter. It is dangerous and increases the postage unnecessarily. Always send postage stamps, for fractions of a dollar, and, if you can get them—*one-cent* stamps; if not, any denomination of postage stamps will do.

How to Create a Market for Honey.

We have now published another edition of the pamphlet on "Honey as Food and Medicine," with more *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy **5** cents, postpaid; per dozen, **50** cents; per hundred, **$3.00.** On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit. Try it, and you will be surprised.

Our Premiums for Clubs.

Any one sending us a club of **two** subscribers for 1 year, for the Weekly, with **$4,** will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For **three** subscribers, with **$6,** we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For **four** subscribers, with **$8,** we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For **five** subscribers, with **$10,** we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

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Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent post-paid for **$1.75.** Address,

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Abronia Mich.

All Excelling. — Messrs. Bingham & Hetherington, Dear Sirs:—I am now selling your Smokers almost exclusively. You are excelling yourselves in smokers all the time.

Respectfully, J. G. TAYLOR.
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All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's "Conqueror Smoker" did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham.

G. M. DOOLITTLE.
Borodino, N. Y., Aug. 15, 1882.

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Bingham & Hetherington Uncapping Knife..			1.15

With thanks for letters of encouragement, and the absence of complaining ones, we tender to our thirty-five thousand patrons our best wishes.

Very Respectfully Yours,
BINGHAM & HETHERINGTON.
Abronia, Mich., June 1, 1883.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

WANTED—2,000 lbs. of **Extracted Honey** at once; clover or basswood. Please state lowest price. "Cash with the order." Address,

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J. P. H. BROWN,
5BD15t Augusta, Georgia.

1883. JOSEPH D. ENAS, 1883.

(Sunny Side Apiary.)

Pure Italian Queens, Bees, Colonies, Nuclei,

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BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN.

Editor of the Weekly Bee Journal.

925 West Madison Street, Chicago, Ill.

It contains 160 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey Bee, and at the same time produce the most honey in its best and most attractive condition.

Appreciative Notices.

A neat and abundantly illustrated hand-book of apiculture.—American Agriculturist, N. Y.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Tenn.

Contains all the information needed to make bee-culture successful.—Eagle, Union City, Ind.

Just such a work as should be in the hands of every beginner with bees.—News, Keithsburg, Ill.

Valuable for all who are interested in the care and management of bees.—Dem., Allegan, Mich.

Engravings are fine. Gotten up in the best style, and is cheap at the price.—Farmer, Cleveland, O.

Carefully prepared for beginners.—Farmers' Cabinet, Amherst, N. H.

A very valuable work to those engaged in bee-raising.—News, Prairie City, Iowa.

We advise all who keep bees to send for this excellent work.—Journal, Louisiana, Mo.

Carefully prepared, and of vast importance to bee-raisers.—Indianian, Clinton, Ind.

New and valuable, and embellished with 109 beautiful engravings.—Democrat, Salem, Ind.

Much practical useful information, in a cheap form.—Daily Standard, New Bedford, Mass.

The most perfect work for the price ever yet produced on the subject of bee-culture.—Anti-Monopolist, Lebanon, Mo.

A manual, containing all the newest discoveries in the management of these little workers.—Plain Dealer, St. Lawrence, N. Y.

Full of practical instruction, that no one who contemplates keeping bees can do without.—Farmers' Journal, Louisville, Ky.

It comprises all that is necessary for successful bee-culture, save experience and good judgment. —Daily Republican, Utica, N. Y.

Gives minute details for the management and manipulations necessary to make bee-keeping a success.—Col. Valley and Farm.

Written in an interesting and attractive manner, and contains valuable information for all readers, even though they be not directly interested in the care of bees.—Sentinel, Rome, N. Y.

It embraces every subject that can interest the beginner in bee-culture. The engravings perfectly illustrate the text.—Farm and Fireside, Springfield, O.

Embraces every subject of interest in the apiary, giving very thorough details of the management and manipulations necessary to make bee-keeping a success.—Farm. Longmont, Colo.

It is a valuable and practical book, and contains a complete resume of the natural history of the little busy bee, as well as of all that one needs to know in their care and management.—Chicago Herald.

Contains a vast fund of information in regard to bee-culture. He who would keep abreast of the times must keep posted in all the improvements in his line. We advise all interested to get a copy of this book.—Daily Times, San Bernardino, Cal.

Describes all the newest discoveries in the art, by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive shape.—Signal, Napoleon, O.

It embraces every subject that will interest the beginner. It describes all the newest discoveries in the art by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive form. It is embellished with beautiful engravings, and is the most perfect work of the kind, for the price, that has ever come under our notice.—Farmer, Lancaster, Pa.

PRICE—Bound in cloth, **75 cents;** in paper covers, **50 cents,** postpaid.

THOMAS G. NEWMAN,
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OLDEST BEE PAPER IN AMERICA
THE AMERICAN BEE JOURNAL
ESTABLISHED IN 1861

VOL. XIX. CHICAGO, ILL., JULY 25, 1883. No. 30.

THE AMERICAN BEE JOURNAL
Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

Rectangular vs. Square Frames.

In this issue of the Bee Journal, will be found two articles on the advantages and disadvantages of square and rectangular frames. The former finds an able advocate in Dr. E. B. Southwick, of Mendon, Mich., while the latter obtains competent support by the pen of Mr. G. W. Demaree, of Christiansburg, Ky. This is a good way of ascertaining the strong as well as the weak points of each shape of frame; and, in order to bring out the full arguments on each side, we shall allow *one* more article to each advocate, and then the matter will be left for the readers to decide, individually, as to which is the best frame for all purposes.

We do not intend to take any hand in the *argument*, at this time, for these two gentlemen are quite equal to the task, and will do justice to the subject. But a few remarks of Dr. Southwick, on page 369, bearing on the editor of the Bee Journal, demands attention. The Doctor remarks as follows:

> "I think that the editor of the Bee Journal is as unfortunate as Mr. Doolittle, when he tries to excuse Mr. A. I. Root for such assertions, but I suppose he wanted to keep up the reputation of the editors for truth and veracity. I really believe that not one-fourth of those that use movable frames, use what is to-day considered the Langstroth frame, and that number is silently growing less in proportion."

The point in controversy is the statement said to have been made by Mr. A. I. Root, that "more Langstroth frames are used than all others put together." We certainly did not intend to offer any excuse for Mr. Root, or any one else who might make a statement similar to the above, for its *correctness* is certainly its fortification. Two years ago, just after the close of a very disastrous winter for bees, the editor of the American Bee Journal requested its readers to send in reports of how their bees were prepared for winter—whether they were wintered in the cellars, or out-of-doors; the kind of hives used, etc. From these reports a statistical table was prepared, and one of the facts brought out, was that "more shallow frame hives (Langstroths) were in use than all others put together." Among other remarks we then made the following:

> "Those who have contended that the Langstroth hive is too shallow for wintering, will be surprised to learn that the figures compare very favorably for it. Thus the percentage of losses in all kinds of frame hives is 46; exclusive of the Langstroth hive it is 51, leaving only 53 for the Langstroth, being 8 per cent. in its favor. Again, this report records the results of wintering in 521,330 hives; 211,782 of which were in box hives, leaving 309,598 for all kinds of frame hives. Of the latter, 195,957 are Langstroth—*i.e.*, shallow frames—and 113,561 of all others combined. We really think these figures settle the matter of 'the coming frame.' Had the deep frames been shown to have the advantage, the Bee Journal would have been ready to advocate their universal adoption, for it has no desire to favor any but the most successful methods, hives or implements."

According to the statistics then obtained of 521,330 hives, only three-fifths were in frame hives, and, of these, two-thirds were in the shallow frame or Langstroth hives. In other words—so far as any information has been obtained—more Langstroth (or shallow) frames are used than all others put together!!

Now, so far as our trying to "keep up the reputation of the editors for truth and veracity" is concerned—we accept the situation. Editors make mistakes as well as other mortals; none are perfect; but it *is* pleasant to think well of others' opinions—to feel that they *have* a "reputation for truth and veracity." We do not endorse the opinions of Mr. Root, Dr. Southwick, "or any other man," unless they commend themselves to our judgment! But we hope never to indulge in uncharitable words or feelings against any one for a frank statement or opinion, and, hence, we shall exercise this *generosity* towards Dr. Southwick, when he states that "not ¼ of those that use movable frames, use what is to-day considered the Langstroth frame, and that number is silently growing less!" The Doctor's statement is so far from the facts, as settled by the only statistics available, that we have here an excellent opportunity to let "charity cover a multitude" of errors! The remark about Mr. Root's judging from the orders he receives for regular sizes of frames and materials, is exceedingly *thin*. If there were so many who use the square frame, some one would surely start a "factory" and supply the demand, as Mr. Root, and others, have done for the shallow frames.

The Doctor is, naturally, jolly and companionable, and we cannot think he means one-half of all that his language *might* imply—at least we choose to take that view of it,—while we imagine that we discover the same "twinkle of fun" in *his* eye that he discovered in his good wife's, as she removed the stings from his face, and soothed his burning temples, with her loving hands.

* * *

☞ We acknowledge the reception of a season Ticket to the Southern Exposition, to be held at Louisville, Ky., during the month of August, and also a pressing invitation to attend the Kentucky State Bee-Keepers' Convention, and though it is very difficult for us to leave the office, we intend, if possible, to be there at least for one or two days.

The Rev. Dr. John Dzierzon.

Mr. C. J. H. Gravenhorst, a celebrated German writer, has given the following sketch of the life of the greatest living German bee-master, the Rev. Dr. John Dzierzon, in the *Bee and Poultry Magazine:*

The subject of this sketch was born on the 11th of January, 1811, at Lobkowitz, in Silesia, Prussia, where his father was a farmer. Dzierzon's father was an apiculturist, and it can be rightly said: Parson Dzierzon obtained his love for bees in the milk of his mother. Even in his boyhood, bees fettered his soul. From 1822 to 1833, he studied in Breslau. In 1834 he took the office of the chaplain at Schalkowitz. In 1835 he was called as a Catholic priest to Carlsmarkt, in Silesia, where he worked in blessed activity until the summer of 1869. Since that time he has retired from his clerical duties in order to devote himself thereafter entirely to his bees. He immediately founded an apiary in the garden of the parsonage at Carlsmarkt. The number of hives here soon grew too large, and then he erected additional apiaries in the neighboring village, so that he soon had 12 apiaries, occupied by 400 to 500 hives, and they called him "the Duke of Bees, of Calsmarkt."

In February, 1853, he introduced the Italian bee. He succeeded in propagating this race pure, and to diffuse it over all lands. At first he reared bees in ordinary hives. He invented the really most perfect habitation for bees, the hive with movable combs. After many attempts, Dzierzon built a hive not so long and higher, to make up for it, with a fixed top and floor, and a door at the side. Now he could easily take out and put in again the combs built in chambers; the hive with movable frame work was discovered, and as long as bees are reared, the name of Dzierzon must and will remain, in honor of this discovery.

By means of the hive with movable frame work, the bee became a domestic animal in the full sense of the word. Dzierzon became, by means of his hive, unlimited master of his colonies, for it allowed him an insight into the inmost portion of the life of bees, and, gifted by God, with a remarkable understanding, and with an unusual and keen observation and power of combination, he very soon perceived the wonderful life and motion of the bee hive.

Dr. Dzierzon set up a new and true theory of bees, which endured the fiery ordeal of practice and science, and in a short time became the healthy and solid foundation of a care of bees rational and comformable to nature. With the help of the Italian bees, the gifted master succeeded in silencing the last doubters of his theory, or in making them defenders of the same. His theory is briefly this: There are in a normal colony of bees, 3 kinds of creatures, queen, drones, and workers. The queen is the only perfect female in a colony; is impregnated only once in her life; and lays the eggs for all the forms of bees. She impregnates the eggs in the very laying, or else does not impregnate them at all. In the first case, queens and workers are hatched from them, in the other case, drones. These, the males, are virgin-born, *i. e.*, they are hatched from eggs that the queen lays unimpregnated, which she allows to pass contact with the drone sperm from her receptaculum seminis. The workers, that are hatched from impregnated eggs, are imperfectly developed female beings, which, in spite of these imperfectly developed organs, which admit of no fertilization by a drone, still under certain circumstances, can lay eggs, from which, without exception, drones only are hatched. The parthenogenesis is the doctrine of the virgin-born in the bee hive.

Dzierzon's name has penetrated to all parts of the earth, and he is every where acknowledged a great master, as is shown by the great number of domestic and foreign diplomas.

Since 1848, Calsmarkt has become the goal of pilgrimages of bee-keepers. What Dr. Dzierzon has accomplished for the cause of apiculture, can be learned from his books; but only Dr. Dzierzon himself can set the example of how we must love and investigate the bees. In no way has he done more for bee-culture than in this, that he had formed scholars, in whom his apicultural spirit, the spirit of observation and investigation, has been roused. His life remains sacred to his scholars and friends.

Kentucky Bee and Honey Show.

The Kentucky State Bee-Keepers' Association will hold its annual meeting in Louisville, Ky., Aug. 29 and 30, at the Southern Exposition building. We hope to have a large attendance of the bee-keepers of the State, and also of other States, both North and South, as the convention will be in session during the week of the Honey and Bee Exhibit. And premiums amounting to $60 are offered by the commissioners of agriculture of Kentucky, for Kentucky honey, and $40 by the Exposition, for the finest Italian bees in Observatory hives. The premium on bees is open to the world, and we hope to see a fine display.

The Bee-Keepers' Convention and Honey and Bee Show will be held in the same week of the great exhibition of fruit, for which over $2,000 in cash premiums will be paid.

We extend a cordial invitation to all bee-keepers' societies, to editors of bee publications, to honey-producers, and queen breeders, and all who are interested in apiculture, to be with us. We hope to have the father of modern bee-keeping with us, the Rev. L. L. Langstroth, to whom a cordial invitation has been given.

Reduced fair on all railroads, both North and South, will be offered to all who attend the Great Southern Exposition. It will doubtless be the grandest exposition ever held in the United States, in magnitude, and nearly equal to the Centennial.

N. P. ALLEN, *Sec.*

The National Convention.

The National Bee-Keepers' Association, will hold its Annual Convention in the City Hall and Council Chamber in the city of Toronto, on Tuesday, Wednesday and Thursday, the 18th, 19th and 20th days of September, during the second week of Canada's Great Fair. All the railroads in Canada will issue tickets during this week, good to return, up to Saturday night 22d, at single fare for the round trip. Special excursion rates will be arranged from various parts of the United States, of which due notice will be given. Those who intend being present may be kept posted on the latest excursion rates, etc., by addresssng me, and also that I may arrange hotel accommodation. Private lodgings will, if possible, be secured for those who desire it, and every effort will be made to make everybody comfortable. A grand meeting is anticipated.

D. A. JONES, *President.*

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., July 23, 1883.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—Extracted honey commences to come in freely, and a large crop is reported from all quarters. The demand is very good, and keeps pace with the arrivals. For choice extracted honey I pay 7@10c; the latter price for choice clover. I have received several nice lots of comb honey, for which we paid 15@16c on arrival.

BEESWAX.—Arrivals of beeswax are plentiful. We pay 32c. for a good article on arrival.

CHAS. F. MUTH.

NEW YORK.

HONEY.—Best clover in 1-lb. sections (no glass) 20@21c.; in 2-lb. sections (glassed) 18@20c. Fair quality, 1 and 2-lb. sections, 16@17c Extracted, white, in small barrels, 10@11c.; buckwheat, 8@8½c.

BEESWAX.—Is more plentiful. Prime yellow sells at 36½c.

H. K. & F. B. THURBER & Co.

CHICAGO.

HONEY—New crop of comb honey is being offered, and some sales of it have been made at 16@18c in 1 and 1¾ frames. The receipts of extracted are liberal, and there is a good deal of complaint about unripe honey; consumers holding off. Market, 9@10c for white. Very little dark left, and some inquiry for it.

BEESWAX—30@35c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY.—New extracted is arriving freely—selling for 7 and 8 cts. New comb coming forward slowly; extra white, 16c.

BEESWAX.—No beeswax in the market.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Some new comb jobbing at 14c, but old do. nominal. Only a few barrels of extracted and strained sold within quotations—6½@7½c.

BEESWAX—Sold irregularly from 32@34c—mainly at 32@33c.

W. T. ANDERSON & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—New honey has begun to come forward and with it a demand has sprung up. New white 1-lb. sections sell 19@20c; 2-lbs. more slow 17@18c. Old 1-lb. white, 18@19c; old 2-lb., 15@16c. Extracted has sold better lately, and all old stocks have been sold out at 8@9c.

BEESWAX—Not offering.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—Our supply is gone; we have none to quote.

CROCKER & BLAKE, 57 Chatham Street.

CORRESPONDENCE

For the American Bee Journal.

Transferring—The Old vs. the New.

JAMES HEDDON.

By transferring, I mean permanently changing colonies from box or unsuitable hives, to better hives of other dimensions. Full and explicit directions for manipulating the old method have been so repeatedly given that it seems quite unnecessary to go over the ground here. We have been told all about how to cut open the box hive; how to cut out the combs; to brush off the bees; lay the combs of brood and honey down on to a board covered with woolen cloth; lay the frames onto the combs; cut the combs snugly inside the frame; slip the frame snugly over the comb; tie a string around the same, or tack on some sticks or clamp on some clamps, etc., etc., etc., and when the frames are filled, "hive the colony and the work is done."

The objections to such a plan are these: The different devices for fastening comb do not succeed in holding it in place at all times, especially if put in, in pieces. If not put in in pieces, the ordinary box hive and most worthless frame hives contain scarcely comb enough to fill three frames, and piece work forever after looks, and is bungling. More or less brood is destroyed; honey is leaked and daubed about. A colony thus transferred is not worth as much to me by several dollars as one transferred by the new method.

The old method of cutting out combs and fitting into frames, is entirely obsolete here. With our modern advantages such a course is far inferior to the one I am now going to describe. First, let me say that I considered it a great error to hive a swarm of bees upon other than straight all worker combs, or full sheets of comb foundation, securely stayed, which will be these combs in 48 hours.

When we are buying bees we prefer combs naturally built in empty frames, to those that are transferred. Again, we very much prefer combs drawn from full sheets of foundation to either. No matter how nice the combs may be in the hive I transfer from, I proceed as follows:

About swarming time I take one of my Langstroth hives, containing eight Given pressed wired frames of foundation, and with smoker in hand, I approach the hive to be transferred. First, I drive the old queen and a majority of the bees into my hiving box. I then remove the old hive a few feet backward, reversing the entrance, placing the new one in its place and run in the forced swarm. In two days I find eight new straight combs with every cell worker, and containing a good start of brood. Twenty-one days after the transfer, I drive the old hive *clean* of all its bees, uniting them with the former drive, and put on the boxes, if they are not already on. If there is any nectar in the flowers, the colony will show you box honey. About the queens: I usually kill the forced queen as the bees run in.

I run them together as I would one colony in two parts. Now to the old beeless hive; of course there is no brood left, unless a little drone brood, and we have before us some combs for wax, for more foundation, and some first-class kindling wood.

If you have no method by which you can use a full hive of frames, of full sheets of foundation, running a full swarm into them at once, by all means procure it without delay.

But if any one has a mania for cutting up combs, and fitting them into frames, by method given above, does not prohibit them using all the straight worker comb the old hive contains, after first extracting the honey from them. Should any one wish to increase his colonies at the same time they transfer, the following deviations from the above are only necessary. Run the second drive into another hive of full frames of foundation, and use the old hive as before.

Now, that we have got foundation perfected, so that the bees will draw the lines or side walls to full breeding depth, in from two to three days, why fuss with the old comb from the old hive?

Having once experienced the above method, I shall never go back to the old one. All of you know what a nuisance a few odd sized hives are in the apiary, also some who have just started, wish they had adopted some other style of hive. The above method of transferring, will, in my judgment, get all such out of their trouble.

The cost of foundation, and new hives, is fully made up by the better combs, and you have the change to better style of hive, thrown into the bargain. I have thoroughly tested the results of the plan herein described, and am speaking from experience.

My method of fastening securely full sheets of foundation, is by making it in wired frames with the Given press. Those who have but very few colonies and consequently cannot yet afford a press, can wire their frames and hand press on ready made comb foundation.

Dowagiac, Mich.

For the American Bee Journal.

Bee Items from Australia.

A. VERGE.

In the expectation that some reader of the Bee Journal may be able to advance a reason, I ask the question, why do bees worry and throw out their hatching brood? I began the season of 1882 with 11 colonies, in Langstroth hives, and, not desiring increase, I attempted to prevent it by removing frames of brood to less vigorous colonies, and cutting out queen cells; but the bees appeared dissatisfied with such arrangements, and did no work in the sections. They continued the process of queen cell building, and whenever a colony became populous enough to work in the sections, then also occurred afresh a desire to swarm. However, I continued to cut out cells, and remove brood, till the season had advanced so far that it was very certain swarming must be over for the year.

From January 1st to the end of February, showers of rain fell almost every day, and during all that time and afterwards they employed themselves with worrying and throwing out the hatching brood. To such an extent was the destruction carried on, that I had to unite colonies, and now I have only three which were left strong enough to store sufficient supplies for the winter. The dead bees cover the ground below each hive; in some cases over a space nearly 15 inches square, and in the middle to the depth of an inch—the odor from them being quite disagreeable at a distance of several feet.

At first I thought it might have been brought about by my having checked their desire to swarm, but I noticed that the bees in each of the four common box hives in another part of my yard, were engaged in the same way. Then I concluded that, owing to the rainy weather, the store of honey which they could collect was insufficient to supply the wants of so much young brood, and that they took this course as the surest way of checking the drain upon it. But, as there were thousands of acres of white clover immediately around, and any quantity of flowers from forest trees, with no other colonies within 3 miles to share the supply, I find it difficult to believe that so few colonies should have been unable to collect sufficient for themselves.

In order to increase the honey resources of this place, I have introduced several bee plants. Besides a few rows of white sage and horsemint, I have a small plot of catnip and sweet clover, the produce of seed supplied in January last by Mr. A. H. Newman. These are growing most luxurantly on river-bottom land, while some that I tried on hill-land with a stiff clay subsoil, at a depth of 12 inches, did not thrive at all; in fact, in spite of continual waterings, there are not now to be seen more than half a dozen wretched plants, about 3 inches high, out of a plot of 12 feet square. I think it pretty certain that in this region, sweet clover will require the same depth of soil as does lucerne (*alfalfa*). Of course it would grow on a poorer soil, but it could not produce much stalk or flowers. My trial, however, was somewhat severe, because in a soil not deeper than 12 inches, and under our summer sky, no sufficient moisture, in spite of frequent surface watering, could be present below the top for the nourishment of the plant while tender. Probably if planted on the same kind of land in the fall, it would gather strength enough before the following summer to withstand a long period of dry weather.

I shall have other opportunities, I hope, of reporting upon it; in the meantime I shall plant it upon bottom land, and though in such soil it grows so rapidly as to justify a little apprehension that it may really merit the appellation of "weed" bestowed upon it by some bee men, yet I think it can hardly become such a nuisance as are the worthless weeds which annually overrun these lands, and from which it seems to me, there springs at intervals of time, new varieties of vegetable pests never seen in previous years.

New S. Wales, Australia, June 8,'83.

For the American Bee Journal.

The Best Size of Frame.

E. B. SOUTHWICK.

MR. EDITOR: As I understand that my proposal concerning a "standard frame" has been accepted, I will proceed to fulfill on my part. As a preliminary, I will give the difference in reliability between theory and experience.

Theory founded by correct reasoning from scientific or known facts, always works the same under the same circumstances, while experience only shows what has been done once, not knowing what may be the real cause, but is no sure guide to what may be done again. For example: One year I learned by experience that I could break up a laying worker by dividing the colony and giving each part, a ripe queen-cell. The next year I learned, by experience, that I could not do it. We find, especially in bee-keeping, that we learn many things by long experience, that we learn afterwards are incorrect. Experience shows us consequences without causes, while properly formed theories show us the bottom facts. In forming my theory of frames, I intended to use such facts as are well known to every bee-keeper.

Concerning frames and what they are called, I will say I think that Langstroth's inventions included all frames that were made separate from the hive and separate from each other, and consequently movable. So to Langstroth belongs the honor of inventing the movable-frame, whatever size it may have, but when he put out his book, he made a certain size his frame, others made a certain size their frame, so they came to be called each size after the man who first used or chose them, thus Langstroth's frame, Gallup's frame, etc., while they are really all the Langstroth frame. In this article I shall only consider the square frame in comparison with the long and shallow one, without regard to size.

The first object of bee-keepers and bee-keeping is to rear bees fast, and fill the hive with bees, at the proper time, in the quickest time possible; the second, is to get the most honey, and in the best marketable shape, and third, to comfortably and successfully winter them.

It is a well-known fact that the largest amount of matter can be protected by the least amount exposed on the surface, in a perfect sphere. The bees are philosophers enough to know this, for, when there is no obstruction in the way, and they desire to protect themselves from outside exposure, they assume that form, and in the centre of that sphere they commence to build their comb, and there they commence rearing their brood, and from this centre they extend their comb-building and brood-rearing in every direction, keeping up the same spherical form, as nearly as possible, depositing their honey and pollen close outside the brood nest, where it will be convenient to feed; and when it is fed out and more eggs are deposited, more honey and pollen is deposited outside of them. And so it goes on, until the capacity of the queen is reached.

Now, if we place obstructions any where, so as to prevent their working in this spherical form, we retard their progress, by crowding them in some other direction, and thus exposing a greater amount to the surface, and obliging them to retain more bees at home to keep up the extra heat and do the extra work that they would have to do, in cleaning and waxing up the extra surface they would have. All this extra retention and work is brought in when their best effort should be put forth to rear brood and fill their hive with bees. Need I say that a square frame, and just enough to make a cubic space, is the best? Cannot any person with half an eye see that no frame with right angles can be as good as the square frame.

Now, for the second object: The bees in the square frames have their room filled with brood, but they have some room in the corners of the frames to put in honey and pollen for the brood, and as that is over some part of this sphere, it is always warm, the wax is easily manipulated, the comb is quickly made and filled, and they are ready to go into the sections with honey alone, for they have deposited pollen below for the brood.

In the shallow frames the bees have been crowded out of their natural sphere at a loss, as I have shown, of heat, labor and brood, and the honey and pollen they now bring in has to be stored at the ends of the frames, for the brood goes to the top, and as it is much cooler out there, it will keep more bees from the field or other work in this part, to keep up the heat so as to enable them to work the wax and make comb, and their work must go on much slower than in the square frame, and if kept without the sections until filled up, they will be found to be much behind those in the square frame.

But we will put on the sections. The bees from the long frames go in with a rush, frequently deserting the ends of their combs; and as they find a chance to restore the equilibrium of their sphere, they go to work with a will, making combs in the sections, filling them with honey and pollen, and the queen entering into the spirit of the rest, walks up their and deposits her eggs, thus spoiling many sections of fine honey. I have heard shallow-frame men say that queens did not bother them that way, but when I hear one of them inquire of another how he keeps the queen out of the sections, and find thousands of those zinc bee strainers—I do not know what else to call them—advertised and sold, I conclude the queen does go up; and if she is kept down by that zinc honey-board, it does not prevent the bees from depositing pollen in the sections which is nearly as bad as brood. When the sections are put on the square frames, the bees go into them as they require the room, and as they have room near the brood for the pollen, they seldom deposit any in the sections.

It is claimed for the shallow frame hive that it is better for comb honey. Let us see, I have shown that there is not as much heat accumulated in the shallow frame, and that they require more. The square frame would have much more heat to spare, and, consequently, would warm more room than the shallow frames; and on our tiering-up principle, I have never found any trouble in getting bees to go up, if it is only warm. Considering all the facts in the matter, I can but conclude that a proper arrangement over the square frame hive is better than an equally good arrangement over a shallow frame hive; besides, the sections over the square frame, if the arrangement below is right, are seldom visited by the queen, or any deposits of pollen are found in them.

The last object is to winter the bees successfully. The same reasons why the square frame is best for brood-rearing are equally good for wintering. The power to economize heat, and a chance to go into a natural spherical position, is all a frame can do toward wintering, and as the square frame does that, and the shallow frame does not, the square one must be the best for wintering. I will notice a few of the reasons given for using the long, shallow frame:

"Bees occupy the sections sooner." That is so; but I think I have shown that to be a fault, for the work done early in the sections ought to be done below, that the sections filled by prematurely entering them, and many more, are spoiled by brood and pollen.

"Bees have less distance to go to get to the sections." Let us see; take a frame 12 inches square, and you have 24 inches by the frame to the farther section on it, then cut the frame horizontally in the middle, and place the top half, back of the lower, and you have 30 inches, by the frame, to get to the back section. How is that for distance?

"The Langstroth frame is the most economical." Every one knows that it takes less material to go round a square, with equal sides, than one with unequal sides, both containing the same number of square inches.

"A majority of men that keep bees use it." This, in itself, would be no reason, if it were true (we all know that all our improvements have started with a minority), but I am satisfied that it is as false as I have shown the other reasons to be, for I have taken much pains to inform myself, whenever I have met bee men, whether in convention or elsewhere, and I have come to the conclusion (mind I do not state this to be a fact, as our Langstroth frame men have what they have said about it; and let me here say that when a man makes a statement for a fact, which he does not know to be a fact, I consider it but little better than though he knew it was false) that not one-eighth of the bee-keepers of the United States and Canada use Langstroth's frames, and when I say Langstroth's frame, I mean both of those sizes, that ¼ inch of which has taken up so much room in the BEE JOURNAL.

I think the editor of the BEE JOURNAL is as unfortunate as Mr. Doolittle, when he tries to excuse Mr. A. I. Root for such assertions, but I suppose he wanted to keep up the reputation of the editors for truth and veracity. I really believe that not one-fourth of those that use movable frames, use what is to-day considered the Langstroth frame, and that number is silently growing less in proportion.

Occasionally we find a man changing to that side, probably because he thinks he is getting on the popular side. Mr. A. I. Root boasts that he has obliged some one to adopt the Langstroth hive, not because it is the best hive, but because he cannot get supplies for the best one.

The many letters I have received asking for samples of my hive, some from men who have the Langstroth hive, and my observation generally convinces me that the "blow" is over, and the swells are becoming gradually less, and the undertow will eventually carry the Langstroth hive all out to sea.

I would not wish to convey the idea that these men wish to misrepresent or state anything not true, for I think they believe all they state, and the reasons are these: They make and keep on hand the supplies for the Langstroth frame and hives, and say "if you want any other you must wait until we can make them." The result is, that those who use others than the Langstroth frame supplies, either make their own, as I do, or send elsewhere for them, and the very few orders that A. I. Root gets out of the vast amount used, not of the Langstroth frame class, causes him to say, "More Langstroth frames are used than all others put together." Judging probably from the orders he gets, I presume that it is from them he judges, for I have about concluded that he sometimes thinks that himself and customers are all there is left of bee men. Considering his opinion was formed as above (and I can excuse him in no other way), it proves to me that the Langstroth frame is in a very small minority of the whole.

"They are so easy to manipulate." Now, I will digress a little, and give some comparative experience in the manipulation. Having a large colony in a Langstroth hive, I concluded they must have some honey to spare, so I took my tools and went out to investigate. I removed the cover and cloth from the top, and smoked them plentifully with my big smoker, which is not of the simple or simplicity kind, such as Mr. Root hires debased men with to quit debasing and try to be somebody, but one, that after using the biggest Clark's I could find for a year, the village tinner and myself made one just to my liking. I then attempted to raise a frame of sections. I pried it one way and then the other; then tried to pry up and pried off the top bar. I placed it back, and then pried each frame separately as far as I could, from the centre one, and I crowded that one way and the other, until I thought I had it loose. By this time the bees had begun to come up. I gave them a good smoking and then took hold of the frame with both hands near the ends, and pulled steady. But it did not come, I pulled a little harder and thought it came a little; I tried again, it appeared fast, jerked a little on each end, wiggled it side wise, and by wiggling, twisting, jerking and pulling, I succeeded in raising it up, so that I could see there was some very nice honey in the sections. This gave me new courage, and I went at it with renewed strength. Just at this time an investigating bee struck me on the nose. I looked for my smoker. It was sending forth a stream of smoke sufficient to engulf the whole colony in five seconds if I could have directed it; but I could not. Both hands were engaged, and if I let go I would lose all I had gained. But I was not to be beaten out by one bee, so I wiped him off on my arm and continued the jerking, but as the bees came out thicker and faster, and all appeared to come directly for my face, and sting immediately on arrival, my thoughts were soon turned, not "on peace," but "war to the knife," until I subdued the bees. I dropped the frame, it went down with a thub; I seized the smoker and gave them such a charge as sent all back to the hive or somewhere else, that were not busy on my face trying to pull out their stingers. I covered up the hive and left for the house. I did not swear, but I said "Oh, my," frequently; and when I got into the sitting room, and threw myself into the big chair, I uttered an "Oh, my," which gave all that heard it to understand that I was not the happiest man on earth.

My wife came in, with a tear of sympathy in one eye and a twinkle of fun in the other, and commenced to do what the bees, in their hurried departure, neglected—to take out their stingers. She got out all that she could find, bathed my face with ammonia,and advised me to go and lie down. Well, I have long since learned that it is sometimes better to take my wife's advice (but I never own it). So I laid down and there considered the great pleasure and ease in manipulating bees in the Langstroth hive, and after concluding that if I could find a man fool enough to invest 5 cents in such a hive with at least 50 pounds of honey, I would dispose of that colony. The pain decreasing as the swelling increased, I soon went to sleep. Oh! blessed state of unconsciousness. When called to supper, I was enabled by rubbing, pricking and punching to get one eye open so as to find my way to the supper table; and I sat down a perfect laughing stock for the whole family, which amount to only ten when no outsiders are present. Well, I got over it; but not so with the bees, for I called to my aid some of that stuff the good old minister used to use to make us boys good, "fire and brimstone," and with it silenced the bees, took away the honey, and with an axe, made kindling wood of the hive.

Again, I started for the apiary, took my tools, and this time went by the way of my wife's flower garden. She was there pruning some, and enjoying their beauty and fragrance. She asked me to go in, but no, I was in a hurry going to work at the bees, and observed, I thought there was too much time spent already with flowers. Yet I lingered until she picked me a small bunch of sweet scented roses and tied them together with some striped grass, and as she handed them to me said, "Now hurry along or *you* will spend too much time with the flowers." I took them, took a sniff at them and passed on, feeling a little rebuked, but said nothing.

As I passed along, I took up a stool that I use when a little lazy, while over-hauling a colony. I went to one that I thought had some honey to spare, sat down on my stool at the back of the hive, took another sniff at my flowers and laid them down on a hive to my right, removed the cover and cloth from the one before me, blew a little smoke into the top, just enough to inform the bees that I was there, then removed the back end board of the upper or section-honey department of the hive. The first frame of sections was not all capped, so I took it out and put it on the grass. The next I noticed was filled and nicely capped. I also saw that they had built comb from the lower side of the section frame to the upper bar of the brood frame. I took my long knife, that I use in uncapping, and cut it loose, close to the section-frame, then with my left hand took the frame back and out, and with the thumb nail of my right hand, pushed off the separators (these are the separators that Root and Miller told me would not stay. Well, if I used the Langstroth hive, I should want them spiked on, and the section frames bolted together, but I do not). I put the frame down on the ground, to let the bees fly off, and in the same way proceeded to take off four more frames, which were all that were capped over. I then cleaned off the comb the bees had built between the brood frames and sections, put in five new frames with new sections containing white clover comb, that I had made to order by the bees last fall for starters, and the same separators that were on the others, then the first frame and end board, the cloth and top, and all was right again.

I then took each frame of honey that I had taken off, brushed off what few bees remained on them, and placed them in a box near by, for that purpose. I then took my seat again at the rear of the hive, took out the end board of the breeding apartment, took out a quantity of brood combs, cutting them loose with the knife at the sides, and found them nearly all filled with brood; so much so that the queen had little or no room to lay. This would not do. They would swarm and thus stop the surplus honey gathering. So I selected three combs with brood and bees, examining them closely, to see that the queen was not on them, put them to one side, and filled the space they occupied with new frames of foundation, made on the Given press and nicely wired in, not with wires from upper corners to centre of bottom bar crossing the upright ones as in Langstroth frame, but with upright ones alone.

All were taken out and put back with one hand, holding the smoker in the other, ready to give any bee that showed fight a puff. Well, they were put in, and the hive closed, by putting in the end board. I then took the three extra frames of brood and bees in one hand, and the smoker in the other, and went to a hive where I had put in half a dozen similar frames before, put them in and gave them all a good smoking, and then went back to my stool, took up my bunch of roses, and as I sat there noticing the different speed with which bees leave and return to the hive, and sniffing at my roses, the supper bell rang, so I gathered up my tools and started for the house as happy as a president.

One thing more and I have done—persuading all to use one size frame and the benefit of the same. I would as soon undertake to unite all religions under one creed as to unite bee men in using one size of frame; and anything so very improbable, it is folly to undertake. It would be some benefit to the dealers in supplies and bees, but very little to the honey-producer. For instance: A man has more colonies in the fall than he wants. He, perhaps, could sell them if his frames were right for $6, but it is seldom he can. If he killed his bees, his hive would be worth $2, the combs $1, and the honey that would go with them, when extracted, at least $4 more; so he would really lose $1 in selling. But right here some tender-hearted brother or sister will raise their hand in horror at killing the bees. Is it worse to kill them than to let them die through neglect or ignorance? I will relate a little circumstance to illustrate. As I was killing some bees I did not want, a very good man was present. He told me it was all wrong; that after they had worked for me all summer, then to kill them, it was wicked, and the sin of it would come up against me hereafter. I said nothing, but waited my turn. A few months after, I was at his house. He was butchering a cow. I asked him how old the cow was. He replied that she was 17 years, and that she had been the best cow he ever saw; that she had furnished his family milk and butter for 15 years—my time had come. Says I, deacon, will you, after a cow has helped you support your family for 15 years, now kill her and eat her up. It is awful; it is wicked, and it will come up against you hereafter. He said he would have to give in to my "right of might, for self-preservation."

Mendon, Mich.

For the American Bee Journal.

Square vs. Shallow or Deep Frames.

G. W. DEMAREE.

The movable frame is not a "fixture" in the sense that the apiary house, and the hive or tenement of the bees, are fixtures. The movable frame is simply an implement employed in the hive or tenement to manipulate the inmates of the hive, and to aid in the production of honey.

Viewing the matter from this standpoint, there is no great probability that any one particular form or size of frame will ever be accepted as a "standard frame" by the great mass of bee-keepers scattered all over the American continent, so varied in climate, as well as in other respects bearing on the occupation of bee-keeping. The facts show that there is an unlimited number of sizes of the movable frame in use, yet there are but two "forms" of this greatest of all the implements of the apiary, viz.: the Langstroth shallow frame and the square or deep frame. The issue to be described in this controversy is, which of these two "forms" is best adapted for all purposes in the culture of the honey bee, and in the production of comb and extracted honey.

I unhesitatingly take the grounds that the Langstroth or shallow frame carries with it more good "points," and is, therefore, better adapted for all purposes as an implement in apiculture than any frame yet invented. I regret that in presenting the evidence in behalf of the Langstroth or shallow frame, it does not go before an impartial jury as a whole. Some have already made up their decision, while others are moved by self-interest and prejudice, nevertheless there are many fair-minded apiarists who can appreciate facts and arguments, and to such I appeal. In the first place the size and shape of the frame used will necessarily govern the form and size of the domicile in which the bees must reside and carry on their handy work. I regard this as matter of much importance. The Langstroth or shallow frame is adapted to a hive with a low, broad brood-chamber, which gives a broad and firm base or foundation to the hive, such a hive sits firmly on its stand, is less liable to be over-turned or shaken by high winds, is less easily jarred, admits of two or more stories without becoming too tall and slender in proportion to its base, as is necessarily the case when a square deep frame is used. Such a hive looks better; proportion is always pleasing to the eye, and is better for all purposes for the reasons given than the tall, slender, bee-gumish looking hive which must be construced to accommodate the square or deep.

MECHANICAL CONSTUCTION.

The Langstroth frame being shallow, is more easily made square and free from wind than a deeper frame is. A little "winding" in the frame does not effect its position in the hive as is the case with a deep danggling frame. The hive itself being shallow, will vary less by slight mechanical inaccuracy, and if the old-fashioned porticos are left off, as I would advise in all cases, the hive is the most simple in mechanical construction.

THE BEE HIVE AS A DOMICILE AND WORK SHOP.

The bee hive answers the two-fold purpose to its inmates, for a residence and a factory or work shop. The Langstroth frame as an implement of manipulation for the convenience of the bee master, and to put the internal working of the hive under his control, admits of a structure best calculated for these purposes. Its broad base admits of free circulation of fresh air; every part of the lower floor is handy and convenient to the work going on above. The stories of the hive being low, less distance must be traveled to reach the highest part of them. The honey bee is the most sensitive of all creatures to the slightest jar, and no form of hive protects them so well from this annoyance as the Langstroth hive with its broad base and low stories. For this reason the combs are less liable to be fastened together with cross ties of wax, and propolized at every point.

A low brood-chamber, if the cover to the hive is double with an air space between, as they should always be in winter and summer, is less effected by the heat of the summer sun than a tall one is. I have never seen a single comb that had been injured by the heat of the sun in a Langstroth hive, while I have seen, in transferring from tall box hives, many outside combs that had been melted down by the sun's heat. A low brood-chamber is best adapted to the "tiering up" system of manipulation of bees for the best results. No one will deny that the Langstroth or shallow frame is best adapted for this purpose. Some apiarists tier up the Langstroth hive to three stories or more to accommodate large colonies.

Now, let us take a practical look at the two "forms" of hives which must be used to accommodate the two "forms" of frames.

The Langstroth hive, if tiered up to three stories, is 20x16¼ inches on the stand, if made of 1 inch boards, and 30 inches high if we allow 10 inches for each story. Of course I do not pretend to speak accurately here as to measurement. It will be seen that the Langstroth hive, even when three stories high, is quite well proportioned as a building. Now, let us look on the other picture. A hive made to accommodate the square frame in ordinary use, is about 14 inches square at the base, and if tiered up three stories high, will be at least 3 feet in hight. Of course such a hive is out of all proportion. Some may not wish to "tier up," but many of us do, and it is a question of "all purposes" we are discussing, and adaptability to the "tiering up" system is an important point in the "all purposes."

EASY AND RAPID MANIPULATION

is a matter of the greatest importance in a large apiary. Every skillful manipulator of bees who has experience with the two forms of frames in use, can appreciate the Langstroth or shallow frame for ease and rapid handling. A shallow frame is quicker removed from its position in the hive than a deeper one is. The operator can see better what he is doing to the shallow brood department. The bees are less liable to be crushed or injured when manipulating the frames, and hence less liable to become irritated by rough handling.

The queen is now readily found in a shallow brood nest; in fact it is not unfrequently the case that the operator can tell just where the queen is by the movement of the bees when he first turns back the quilt.

A hive made to accommodate a long and shallow frame, like the Langstroth frame, successfully, gives a larger surface at the top of the brood nest for storing comb honey, and right at the point where bees do their best work.

A shallow frame, when used for extracting, is sooner sealed by the bees when full of honey, *i.e.*, the bees will seal a given number of square inches sooner in a shallow long frame than they will or can on a deeper one. It will be admitted that bees invariably commence to seal the honey at the top of the frames. There must be good reasons for this, and I judge the reason is, that evaporation goes on more rapidly at this point, and hence the honey is ready to seal sooner at the top of the apartment. So great are the advantages to be gained by the use of a shallow frame for extracting honey—for the reason given above—I have been induced to use a large number of frames just half the depth of the Langstroth frame, and of the same length, and these are used in tiers in the upper story, and so manipulated that the full ones are kept in the top tiers where they are sealed with the greatest dispatch. So good has been the results of this system of management in my apiary that I feel justifiable in the digression, if I have digressed. So strong a point do I consider the above in favor of a shallow frame for extracting purposes, that I believe no number of good points in a deeper frame can out-weigh it.

ADAPTABILITY FOR WINTERING BEES.

In my estimation too much has been conceded by the admirers of the Langstroth form of movable frame to the claims of those who advocate the use of a square or deep frame as best adapted for wintering purposes. I take the grounds that no form of frame yet invented is so well adapted to safe wintering of bees as the Langstroth form of frame is. It needs no philosophy to make it comprehensible that a room with a low ceiling is more easily and cheaply heated than one with a higher ceiling. The brood department of the Langstroth hive has this important advantage over a deeper one. The instinct of the bees lead them to store their honey at the highest point in the hive; they do this because nature has taught them that it is the best place for its preservation, as well as the safest place from their enemies.

Now, in a deep brood nest, if the combs are well filled with sealed stores, the bees must cluster on the sealed honey at the top of the frames, or they must dwell below the warmest part of the chamber until they eat their way up to the top, and if any of the stores are left below them in their upward march, the chances are against their ever returning for it during cold weather, if the supply should be exhausted above. When bees are wintered on the Langstroth frame, the cluster moves in a horizontal direction with the spaces between the combs, and pass the entire winter in the most congenial part of the hive. Bees winter better in a shallow brood nest than they do in a deeper one, simply because their stores are located in the warmest part of the hive, and in a room with a low ceiling, which is always warmer than a room with a high ceiling.

CONCLUSION.

I wish to conclude by saying that I have given my reasons for preferring a shallow frame, gleaned from personal experience with both forms of frames in use. The "movable frame" is as much an "implement" in apiculture as the plow or pitch fork are implements in agriculture, and, hence, each apiarist should act just as every intelligent farmer acts, viz.: use that which is best adapted to his branch of the business to his locality, etc., always guided by the light of his experience.

Christiansburg, Ky.

For the American Bee Journal.

Do Queens Mate More than Once?

I. P. WILSON, D. D. S.

The above question I supposed to be settled beyond dispute, and I was a little surprised at Mr. Hinman's article on page 357 of the BEE JOURNAL, claiming that queens do sometimes mate a second time.

That Mr. H. is mistaken about his queen mating with a drone after the first fertilization, I think there can be no doubt.

I will relate an incident that occurred in my own apiary, a month or two ago, which will show how easily one may be deceived, as Mr. H. doubtless has been.

I opened one of my best colonies, for the purpose of removing the queen to another colony. I found, on the second frame, that I removed a beautiful young queen, evidently about 3 or 4 days old. I felt greatly disappointed, as my choicest queen had been in this hive. I said to myself, "they have superseded her; what can it mean?" To determine how long she had been missing, I proceeded to examine the comb, and found, to my surprise, that eggs and larvæ were abundant. The old queen was still on duty, and I found her depositing eggs, here and there, as she quietly moved along over the comb. She was too busy to notice me or the rival queen. There was only one queen cell in the hive, and that was the one from which the young queen had hatched. Why they reared this young queen, and why the old queen did not object to the procedure is, to me, unaccountable. I removed the old queen to another colony, and left the young queen to take her place. A few day later, she mated. I saw her leave the hive, and in 22 minutes she returned with the unmistakable evidence of having made a successful "bridal trip." Now suppose I had not discovered this virgin queen when I did, but had opened the hive the day she mated, found the evidence of her just having mated, found also the eggs and the larvæ, and had not discovered the old queen, I might possibly have been deceived as Mr. Hinman doubtless was.

Burlington, Iowa, July 18, 1883.

For the American Bee Journal.

Few Items from the Pacific Coast.

J. D. ENAS.

Since I wrote about the young bees dying, or rather going away from the hives wingless, etc., we had a honey spurt, and the hives are getting filled. Bees preferred to fill the combs with honey instead of having them filled with eggs. Whether sections were on or not, they would fill the combs in the lower story to the detriment of the queen. I think they must have gnawed the young bees out, as they were not completed, wings not half formed; some were more perfect than others. No matter how often the bees were placed on the bottom board, they would go away from the hive. If they were put in at the top, they would soon be at the entrance. On one hive I had Root sections at the sides, not commenced on, two empty combs for eggs, the balance filled with brood and stores, but they preferred to fill the empty combs with honey, instead of letting the queen fill them with eggs, and would not go into the side sections, though they all had starters. I removed the side sections and gave more empty combs, and they are satisfied for the present. There are no more young bees crawling.

I saw a laying worker in the act of laying, to-day. I have a young queen in a hive that should have young bees hatching, but she is backward. To-day, on looking for her, I saw a worker, with its head in a cell, sipping honey, and from it came an egg just like as though it came from a queen. I watched it until the egg dropped on to the comb. I caught and caged her before she could escape. She is a laying worker. I looked and saw no more. I think there are probably more, and that they have bothered the queen in her duties. The queen looks glassy, and very much the color of old robber bees.

I shall send the bee to Prof. Cook, with an insect that I caught killing bees. I have seen a second of the kind, but had nothing to save it with, and I would not like to put my hands to it. It is a regularly savage and blood-thirsty insect. I have it in alcohol. I caught it between the burlap covers, over the frames. It has very quick motions, and always faces the music on guard. I jumped for the bee, and it let its jaws into the bee's abdomen, and held it clear up in the air, and was walking off with it, when I stopped it. There must be more of them.

Queen-rearing has not been profitable this season, owing to losing many after being hatched, and even after laying. On opening hives to pick out a choice queen for a customer, the young bees would look all right, but the queen would be missing. The hive and colony would seem all right, though sometimes there would be no eggs, but cells. I handle bees carefully, not to kill bees nor queen in moving frames, etc. It was not for want of room, nor on account of swarming, as I had but a few swarms in the air. Before June, I could not always open a hive when I should, and the bees would destroy the cells.

Our honey crop will not be large this season. Many have had no swarms nor surplus, while some have taken 60 lbs. each from some few hives. The most I have taken, so far, from any one hive is about 75 lbs., most of it extracted. My bees increased from 23 to 72; have sold at different times, and now have 90 of 10 frames each, all strong and in good condition to stand the season of drouth, which will soon be on us in this vicinity. We had two days 102° in the shade. One day I thought all of my bees would swarm at once, but I raised the front, and in a short time the bees were all in their hives.

Napa, Cal., July 4, 1883.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

☞ In reply to several inquiries, let me say, that valuable queens should never be introduced to colonies having long been queenless. They should be introduced in introducing cages, which we make by wrapping wire cloth around a stick one-half by seven-eighths of an inch, and usually make them 4 inches long, with a plug in each end, and in such a manner that no wire points come inside the cage.

Diseased Bees.

I have got a colony of bees that I do not understand; they are bloated up so, and some of them get black; they lay around the entrance of the hive and die off very fast. I tried Mr. Hicks' cure for the disease, but it did them no good. They are Italian bees. I changed hives with them; the combs are clean and they have lots of brood.

JAMES GARDINE.

Ashland, Neb., July 16, 1883.

ANSWER.—I would have to see more of the phenomena you mention to give a satisfactory answer.

The colony may be robbing, and becoming demoralized, and so daubed with honey as to turn jet black. I am rather of the opinion that is the cause of the trouble. Follow up and see if you can find where they are at work.

Getting Straight Combs.

You say I will be "as successful as any one in getting straight combs if I manage properly." Please explain your method. W. B. DRESSER.

Hillsdale, Mich.

ANSWER.—I think that my success in getting combs built in sections so straightly that no separators are needed, is the result of the following conditions:

1. I use full size pieces of foundation, and such foundation as bees draw out readily, rather than build on to, perhaps beginning on one side and getting away ahead of the other.

2. I put these pieces into the centre of the section with that invaluable little implement known as Parker's comb foundation fastener, and it stays where I put it.

3. I place the hive plumb from side to side, and thus the foundation hangs true in the section.

4. I place all my hives declining toward the front.

5. The combs in my sections run parallel with those in the brood-chamber.

6. The narrow pieces of the sections are that width that the bee passages are ⅜ instead of ¼ inch, as is commonly used. This point is otherwise very advantageous.

7. The slats of my honey board are so arranged over the spaces between the top bars of the frames of the brood-chamber that bits of comb built up from said top bars cannot prejudice the bees in regared to crooking or side bulging the combs in the sections above.

8. The more of the brown German blood your bees possess, the quicker, whiter and straighter will they build comb.

Drones Variously Marked.

On page 344, BEE JOURNAL, Mr. J. O. Shearman asks me to answer the following: "Can a queen breed two kinds of drones at the same time? Or would it be called an indication that there might be two queens in a hive to see drones like pure Italians and pure blacks living together by the hundreds?" I do not know just what to credit to the word "kinds." Often drones go into neighboring hives and habit them the rest of their peaceful life-time. Then we see two kinds in a hive; but we often see the same "kind" of drones variedly marked, and I think such variations are much more radical among the drones of cross-breeding than among the workers. Many times I have seen drones that showed scarcely any yellow, side by side with brothers that were very yellow. Cross-breed bees are much more regular in action than in color.

Completing the Sections, etc.

Will you please answer the following through the "What and How" department of the BEE JOURNAL:

1. What per cent. of the whole number of sections used in your apiaries, during an average season, do the bees naturally complete?

2. Is the attempt to force the completion of boxes profitable?

3. What method do you use to accomplish that end when thought desirable?

4. What disposition do you make of sections partially filled?

FRANKLIN P. STILES.

Haverhill, Mass., July 13, 1883.

ANSWERS.—Let me say that the foregoing questions, I believe, are asked by a practical honey-producer of clear understanding.

1. As we never, at any time, allow our bees to become crowded for room, in the least, we have about one-third of the whole number of sections used during the season not sufficiently completed for market, when the season closes in September. We know that a different system of management would complete nine-tenths of them, but under such a system that nine-tenths would weigh no more pounds than our two-thirds.

2. I think it is generally understood that the attempt to force the completion of boxes has not been made a success, in the light of profit and loss.

3. We have never tried it.

4. When we remove our sections in the fall, we sort them over, and those not sufficiently capped to be readily merchantable, we uncap all the cells

that may be sealed; place them in a broad frame made for the purpose; hang them in the extractor, and throw out the honey, putting the sections of drawn comb back into the case, and put them away for next year's use.

In the fall, after extracting sections when recasing the sections of empty combs (as we use no separators), the combs are not always perfect in the frames; when we find one side a little fuller than the other, we put the two full sides together, and the hollowing sides together. No matter if the full sides of the combs should touch each other, when the bees begin operations the following season, they will cut right through, building out the other sides equally, and the occasional crooked ones are thus made straight.

In reply to several inquires received of late, allow me to append the following:

1. How to get the sections out of Heddon's cases.

This troubled us very much the first few days after using the case, but now we can remove the sections from our cases two or three times as fast as from any other arrangement. We invert the cases, four inches and a half above our honey table, the end pieces of the case just touching the rests made for the purpose. Now we have a solid wooden block scant 4 inches square and 12 inches long. This will readily slip through each department containing 7 sections. We hollow out one side of the block so that it will not bear any on the sections, except at the corners (the same object can be added to a block, by tacking on two little beveled strips). Lay this block across one row of sections, bring the palms of the hands down solidly and squarely on top of the block, one at each end; and the sections, block and all, will drop right through. (For a little handle, a shingle nail driven in will answer the purpose, in the middle of the upper side of the block, with which to draw it up.) Now you can slide the sections out from under the cases. This can be done in much less time than you have been reading this.

In emptying cases we usually drive all four rows of sections out, and then set the case aside. The honey will not break by the sections dropping this four inches, as they sort of slide out of their position, not having half an inch to fall.

SELECTIONS FROM OUR LETTER BOX

Two Queens in One Hive.

Last evening I saw what I have long wanted to see. I examined a hive, where I had introduced a young laying queen, some 3 weeks ago. On the first comb I removed, I found my queen all right. On removing another comb, by the side of the first one taken out, what should meet my eyes but another laying queen. Now, I know two queens can do duty in one hive. I removed one of them to another colony that was queenless.

W. H. SHIRLEY.

Glenwood, Mich., July 19, 1883.

Large Honey Crop.

Our honey crop is very large and of the finest quality. We are having a great excess of rain. We cannot thresh our wheat (it is so wet,) and we fear it will be damaged in the shock.

N. P. ALLEN.

Smith's Grove, Ky., July 17, 1883.

Illinois as a Honey-Producing State.

I believe that we are largely creators of circumstances. As time rolls on we are drifted hither and thither, often by circumstances over which we have no control. A number of years ago I became infatuated with apiculture, and the longer I engaged in the business, the better I liked it. Keithsburg, Ill., where I was located, was one of the very best points for an apiary in the country; and when my favorite occupation promised to pan out big, I felt that I was enlisted for life in the sweet work. Unfortunately for my hopes and desires, I became sorely afflicted, and while all last season I worked hard in my apiary, there was not an hour that I did not suffer pain; and when the spring of 1883 opened, I became so completely afflicted that I was driven from the field of apiculture into the uncertain pursuit of health. In my wanderings I pulled up at this beautiful little city of four thousand inhabitants, where I studied the profession of medicine 20 years ago. My health is much improved, and I have reason for believing that I shall entirely recover. But I have no bees, and although I have enquired earnestly for a scientific apiarist in these parts, I have found none. There are a few box-hive and log-gum fogies, and I found one bright light in the bee world, who insisted that the drones laid all the eggs. There is a young gentleman about 3 miles from the city who is learning scientific apiculture, and will make a success of it, I think, for he is both intelligent and industrious. I do not know whether I shall stay here next season or not, but if I recover my health entirely, I shall have an apiary wherever I may locate. I am inclined to believe that Illinois is as good a State for honey production as there is in the Union. I shall work, wherever I may be, to extend the circulation of the AMERICAN BEE JOURNAL, for it will kill fogyism wherever it goes, and clean the cobwebs of superstition from the brains of all who read it. The JOURNAL comes to my new address regularly, and I read it with the enthusiasm that a boy does his first primer.

J. R. BAKER.

Warsaw, Ind., July 17, 1883.

Honey from Alfalfa.

In regard to California honey granulating, all the honey I have put up (some 19 tons) would candy by November or December, and some of the best became candied in warm weather. In giving a list of the principal honey-producing plants, in Cook's Manual, no mention is made of alfalfa, which is our main source of honey here. Last year 8,000 out of the 9,465 lbs. of honey which I put up, was from alfalfa. Since May 27, I have extracted 7,100 lbs. of alfalfa honey; and it is first-class honey too. P. LOUCKS.

Kingsbury, Cal., July 9, 1883.

[Alfalfa has often been mentioned as a honey producer. In the BEE JOURNAL for July 19, 1882, page 456, this paragraph occurrs:

Alfalfa yields a good quality of honey, and is in bloom every month in the year; it will grow without irrigation in any kind of soil, amongst stones, on such land as cannot be cultivated. Scatter the seed plentifully during the winter months, so that the winter rains may settle it into the soil and give moisture enough to cause it to germinate; keep sheep off the ground so planted, and let the alfalfa get a start, and nothing but gophers can eradicate it. Most persons think that alfalfa must have plenty of water at all seasons of the year in order to grow, but for bee pasture good results may be had from it without other moisture than that obtained from rain.

Of course it is an oversight of Prof. Cook's not mentioning it in his Manual; he will, no doubt, include it in the next edition.—ED.]

The Honey Harvest.

Every one keeping bees think that the harvest of honey will be good in this locality. There has been some quite severe losses since the gathering of last year's crop; but the bees that stood the storms are doing a fair business at present, although we have had it pretty wet, and it continues to be so, with the heaviest of showers, and as much of the dreadful cyclone as one would wish to see, having due respect for his house, bee hives, etc. Yet we have some very warm days between these great storms, and no cold days that would be considered wholly lost to the honey bee. It is my opinion that the bees are doing well on the clovers, and in 2 or 3 weeks buckwheat will be in. then they will be "the busy bees" in earnest. It is the great event always with us in this country. JOHN MORRIS.

Manston, Wis., July 13, 1883.

Honey Tree of India.

In December I was in Australia and saw a tree, a native of India, in bloom. Wherever I saw the trees they were covered with bees. I believe it to be the best honey tree I ever saw in any country. I have just returned from there and found the seed nearly ripe. I have made arrangements to gather seed. It is an evergreen, branches thick from the ground, grows a beautiful sugar leaf shape, although only a few years introduced into the country; I saw some nearly 30 feet high. I think it is a hardy tree and will live in your climate, and think it would be a valuable addition for bee and honey culture in America. I have lived many years in the United States.

EDWARD PARSONS.
Auckland, N., Z., June 19, 1883.

[The tree belongs to the linden family (*Tiliaceæ*,) so is a near relative of the most noted honey tree of our woods, the linden or basswood. It is, however, highly improbable that the tree can be grown in the United States; if so, assuredly only well South. The family is really a large one, but nearly all belong to the tropics, only represented in our country by one species.

Is it not evidence of botanical relationship which amounts to something when natives of opposite sides of the world, and in wholly different climates, thus possess similar properties? Last year a specimen of *sterculia*, introduced into the Southern States, was received for name, its honey qualities also being observed as excellent. Our linden is the nearest botanical relation of this tree too, and therefore the same remark applies.—T. J. BURRILL, Champaign, Ill.]

Bees in New York.

It is still wet here, and bees are getting little more than a living. We had a few days during which a little gain was made in the brood combs, but no work has been done in sections. I am glad to hear of good yields in other parts of the United States. Basswood will be in bloom in about a week, when I hope for better times.

G. M. DOOLITTLE.
Borodino, N. Y., July 12, 1883.

Bees Hanging Out.

Why do some of our bees lie out so much? They fill the portico day and night. We have taken the honey and given them more sections.

J. L. HARRIS.
Griffin, Ind., July 17, 1883.

[They probably find it too warm in the hive for the numerous family, or there is nothing to gather. Give them a little ventilation by placing a small piece of wood under the cover, and they will go to work all right, if there is anything to do.—ED.]

Bees in Arkansas.

I wintered 125 colonies in 1, 2 and 3 story hives without loss. They never breed much before the middle of February. On the last of March I united them down to 100 colonies. March 15 brings us plenty of bloom, but our bees never gathered much honey, on account of cold weather. On April 1, the weather turned warm and dry, and a honey flow came from willows, clover and poplar. On May 1, every hive was solid with brood and honey. I extracted from 2 story hives, from 40 to 60 pounds; on May 20, we had a cold rain; on the 21st the thermometer, at day break, was at 35° above zero; frost was reported in low land, but no damage was done. On the 24th, our bees went to work again. On May 28, I extracted again about 40 pounds, from the 2-story hives. Now I could extract again, 40 to 50 pounds, from the second stories. Bees are working well now on sumac, and horsemint begins to bloom. For the last two seasons we have had no consumers among the bees; every nuclei has been built up to a strong colony and given a surplus. This year there has not been much swarming. Extracted honey sells from 8 to 10 cents per pound; comb honey 12 cents. I cannot make a large and full report. I had a crop planted, and I could not obtain the necessary help, but next year I shall become a specialist with bees. I send you a specimen of what is called here horsemint. It blooms from July 1 until frost, and grows all over this State. It is same mint as in Texas, please name it.

FRANK THIAVILLE.
Forest City, Ark., July 3, 1883.

[It is the horsemint (*Monarda*), and yields an excellent quality of honey. It is the principal honey-producer of Texas.—ED.]

Clover Honey Harvest Over Now.

The clover honey harvest is over now, and a busy one it was. We had good weather, with the exception of five days last week, which were too hot, and killed the last clover that would have kept the bees at work a little longer. But when I look at my honey, I am well satisfied for this year. I commenced with 23 colonies; devoted 3 for experiments, and, of course, the result was, not much surplus from them. I devoted 7 for comb honey; the result was about 250 pounds, in one-pound sections, an average of 36 pounds; not a very good result. Swarming is the cause; could I control it, I could do much better. From one Cyprian colony, devoted to comb honey, I obtained 5 swarms, but only about 12 one-pound sections filled nicely, and the honey in the brood department was well used up. From one colony that did not swarm, I got 66 pounds in one-pound sections; that is the best I ever did with one colony devoted to comb honey. Give me the cross of Italian and German bees for all purposes. From the 13 colonies devoted for extracted honey, I took 85 gallons, and can easily get 15 gallons more, to make it 100 gallons; but to do this I must take up the increase, for 25 colonies is about all I can keep here, in the city limits. But here I run against B. F. Carroll, on page 336 of the Weekly BEE JOURNAL. What does he call one who kills bees? He may say advertise and sell your queens. But I think after purchasing cages and paying postage, there would be very little left for my work. I might unite the bees, and board them until October, when they may die a natural death, from old age. Is it not strange that those standard frame advocates have not stated the greatest score against the Langstroth frame, namely standing the frame on end, when extracting?

LOUIS HOFSTATTER.
Louisville, Ky., July 13, 1883.

Bees Reveled in Clover.

Basswood is just coming into bloom. Bees have done well on white clover, considering their condition in April and May. I have now 282 colonies, and 18 more to hear from. I could not run an apiary of that size without clipping queen's wings. I have taken 70 pounds of fine honey from one hive of Italians, and think they have about 20 pounds more. I am extracting all clover honey, and marking the barrels so as to avoid mixing. I do not think it a suitable pursuit for an invalid to follow.

WM. LOSSING.
Hokah, Minn., July 13, 1883.

Honey from Dog Fennel.

Mr. Enas, of Napa, Cal., asks if honey from dog fennel is poisonous? We get a good deal of honey here from wild camomile, which resembles the dog fennel of Tennessee, which is very bitter, but not poisonous. It loses the bitter taste, to some extent, but not entirely, after several months keeping.

E. P. MASSEY.
Waco, Texas, July 13, 1883.

Bees in Alabama.

We have had a perfect drouth almost ever since April 1. Until the last 10 days, bees have scarcely gathered enough honey to keep up brood-rearing. But now the sourwood is just in, and it brought honey with it; bees are booming, and the honey is very white. Some ask when we can rear the best queens? We can rear just as good queens in one month as another, from April to September, provided our rules are carried out, viz.: plenty of pollen, plenty of honey, and plenty of bees. This has been one of the coldest and most backward seasons we ever experienced. We had frost in May. If there are any bee-keepers who wish to move South, there is room enough among our mountains; thousands of pounds of honey are wasting for the want of bees to bring it in.

T. S. HALL.
Kirby's Creek, Ala., July 2, 1883.

Basswood Opening.

Bees have done very well up to the present week; this week has been too cool and wet. Basswood is just opening.

J. I. PARENT.
Charlton, N. Y., July 14, 1883.

Comb Foundation.

MR. EDITOR:—I send you by this mail samples of foundation made on the Given press, in answer to Messrs. Bray & Seacord, of Warthan, Cal., on page 338 of the BEE JOURNAL. For thin foundation the only difference is the sheets are thinner; the work is the same after being sheeted. There is no change in machinery from heavy foundation to thin foundation. It works thick and thin simultaneously. Bees here are just waiting for something to turn up; just making a living. Thus far, the honey harvest in northern Texas might be represented numerically as follows: 000 pounds; if we have no change, two more naughts may be added, making it 00.000 pounds, surplus honey for 1883. We hope our Kentucky friends will remember us kindly at their coming convention. I am happy to greet America's greatest bee-master, Rev. L. L. Langstroth, again. He is our father in bee-literature.

WM. R. HOWARD.
Kingston, Texas, July 10, 1883.

[The samples are received; both the *thick* and *thin* foundation have very thin bases to the cells, and as both were made on the same mill, this full answers the query of Messrs. Bray & Seacord.—ED.]

Honey from Blue Thistles.

Our prospects for a good crop of honey were never better. The spring was late, but since settled weather came, the bees have built up rapidly. Swarming is in full blast. On Friday of last week, one of our box-hive-beemen had 8 swarms in one bunch. He hived the first swarm that came off on that day; seven others came out and clustered on the hive in which the first had been hived, thus making 8 swarms together. They were divided and put in 3 or 4 boxes. Have not heard how they were doing. My bees are storing honey rapidly from blue thistle. This honey is very white and of fine flavor.

J. W. CARTER.
Pleasant Dale, W. Va., July 11, 1883.

Dog Fennel Honey.

Last year I had some very late swarms that gathered a great deal of honey from dog fennel. The honey is unfit for use, having a bitter taste; one dose was enough for me. Two colonies had nothing but dog fennel honey to winter on, and came through as strong as any. Bees will not gather honey from dog fennel when there is anything else to work upon, though it blooms from June until October. There is an immense quantity of it in this country, making the fields look perfectly yellow.

W. S. DOUGLASS.
Lexington, Texas, July 16, 1883.

Died.—My little son, Wm. R. Howard, died of congestion, after a short and painful illness, on the 3d inst. Aged 3 years, 8 months and 26 days.

WM. R. HOWARD.
Kingston, Texas, July 12, 1883.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ Articles for publication must be written on a separate piece of paper from items of business.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

☞ Do not send coins in a letter. It is dangerous and increases the postage unnecessarily. Always send postage stamps, for fractions of a dollar, and, if you can get them—*one-cent* stamps; if not, any denomination of postage stamps will do.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

How to Create a Market for Honey.

We have now published another edition of the pamphlet on "Honey as Food and Medicine," with more *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy **5** cents, postpaid; per dozen, **50** cents; per hundred, **$3.00.** On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit. Try it, and you will be surprised.

Our Premiums for Clubs.

Any one sending us a club of **two** subscribers for 1 year, for the Weekly, with **$4**, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For **three** subscribers, with **$6**, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For **four** subscribers, with **$8**, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For **five** subscribers, with **$10**, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......$1 00
" 100 colonies (220 pages)...... 1 50
" 200 colonies (420 pages)...... 2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

☞ Do not let your numbers of the BEE JOURNAL for 1883 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

Bingham Smoker Corner.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent post-paid for **$1.75.** Address,

BINGHAM & HETHERINGTON,
Abronia Mich.

All Excelling. — Messrs. Bingham & Hetherington, Dear Sirs:—I am now selling your Smokers almost exclusively. You are excelling yourselves in smokers all the time.

Respectfully, J. G. TAYLOR.
Austin, Texas, May 10, 1883.

Cyprians Conquered.

All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's "Conqueror Smoker" did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham.

G. M. DOOLITTLE.
Borodino, N. Y., Aug. 15, 1882.

During the following three months, Bingham Smokers will be sent post-paid, per mail, on receipt of the following prices:

The "Doctor"..	(wide shield)—3½	in. fire tube,	$2.00
The Conqueror	(wide shield)—3	in. fire tube,	1.75
Large...........	(wide shield)—2½	in. fire tube,	1.50
Extra...........	(wide shield)—2	in. fire tube,	1.25
Plain............	(nar. shield)—2	in. fire tube,	1.00
Little Wonder..	(nar. shield)—1¾	in. fire tube,	.65
Bingham & Hetherington Uncapping Knife..			1.15

With thanks for letters of encouragement, and the absence of complaining ones, we tender to our thirty-five thousand patrons our best wishes.

Very Respectfully Yours,
BINGHAM & HETHERINGTON.
Abronia, Mich., June 1, 1883.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

◆

Special Notice.—We will, hereafter, supply the Weekly BEE JOURNAL for one year, and the seventh edition of Prof. Cook's Manual of the Apiary, bound in fine cloth, for **$2.75**, or the Monthly Bee Journal, and the Manual in cloth for $1.75. As this offer will soon be withdrawn, those who desire it should send for the book *at once*.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a statement of account every week.

◆

☞ May we ask you, dear reader, to speak a good word for the BEE JOURNAL to neighbors who keep bees, and send on *at least one new* subscription with your own? Our premium, "Bees and Honey," in cloth, for one *new* subscriber to the Weekly, or two for the Monthly, besides your own subscription to either edition, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

◆

The New York and Lake City Mining Company.

A prominent engineer, who is well acquainted with Mines in all parts of Colorado, was recently invited to examine the property of this Company. He gave it as his opinion, and he is perfectly disinterested, that the property is the richest he had ever seen, and is worth $5,000,000.—*Adv.*

HOLY LAND QUEENS

BY RETURN MAIL.

Untested, single Queen, $1.00; 6 for $5.50; or 12 for $10.00. Warranted Queens 25 cents more, each.

I. R. GOOD,
30A2t 8B1t **TULLAHOMA, TENN.**

Queens! Queens! Queens!

We are now prepared to send you by return mail the handsomest and best Queens, bred from our best honey-gathering strains of ITALIANS and ALBINOS. Purity and safe arrival guaranteed.

Tested queens,		.......each......	$ 2.00
Warranted queens,		.......each......	1.00
"	"	........per ½ doz...	5.50
"	"	........per 1 doz...	10.00
Untested	"	..........each......	.90
"	"	.......per ½ doz....	5.00
"	"	........per 1 doz....	9.00

If you want Queens for BUSINESS, send us an order. We are breeding from an entirely new strain this season, which bids fair to outstrip anything we have ever had before for honey. Address,

WM. W. CARY & SON, Coleraine, Mass.

The Oldest Queen Breeders in America.

THIS PAPER may be found on file at Geo. P. Rowell & Co.'s Newspaper Advertising Bureau (10 Spruce St.), where advertising contracts may be made for it in **NEW YORK.**

BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN.

Editor of the Weekly Bee Journal.

925 West Madison Street, Chicago, Ill.

It contains 160 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey Bee, and at the same time produce the most honey in its best and most attractive condition.

Appreciative Notices.

A neat and abundantly illustrated hand-book of apiculture.—American Agriculturist, N. Y.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Tenn.

Contains all the information needed to make bee-culture successful.—Eagle, Union City, Ind.

Just such a work as should be in the hands of every beginner with bees.—News, Keithsburg, Ill.

Valuable for all who are interested in the care and management of bees.—Dem., Allegan, Mich.

Engravings are fine. Gotten up in the best style, and is cheap at the price.—Farmer, Cleveland, O.

Carefully prepared for beginners.—Farmers' Cabinet, Amherst, N. H.

A very valuable work to those engaged in bee-raising.—News, Prairie City, Iowa.

We advise all who keep bees to send for this excellent work.—Journal, Louisiana, Mo.

Carefully prepared, and of vast importance to bee-raisers.—Indianian, Clinton, Ind.

New and valuable, and embellished with 109 beautiful engravings.—Democrat, Salem, Ind.

Much practical useful information, in a cheap form.—Daily Standard, New Bedford, Mass.

The most perfect work for the price ever yet produced on the subject of bee-culture.—Anti-Monopolist, Lebanon, Mo.

A manual, containing all the newest discoveries in the management of these little workers.—Plain Dealer, St. Lawrence, N. Y.

Full of practical instruction, that no one who contemplates keeping bees can do without.—Farmers' Journal, Louisville, Ky.

It comprises all that is necessary for successful bee-culture, save experience and good judgment. —Daily Republican, Utica, N. Y.

Gives minute details for the management and manipulations necessary to make bee-keeping a success.—Col. Valley and Farm.

Written in an interesting and attractive manner, and contains valuable information for all readers, even though they be not directly interested in the care of bees.—Sentinel, Rome, N. Y.

It embraces every subject that can interest the beginner in bee-culture. The engravings perfectly illustrate the text.—Farm and Fireside, Springfield, O.

Embraces every subject of interest in the apiary, giving very thorough details of the management and manipulations necessary to make bee-keeping a success.—Farm, Longmont, Colo.

It is a valuable and practical book, and contains a complete resume of the natural history of the little busy bee, as well as of all that one needs to know in their care and management.—Chicago Herald.

Contains a vast fund of information in regard to bee-culture. He who would keep abreast of the times must keep posted in all the improvements in his line. We advise all interested to get a copy of this book.—Daily Times, San Bernardino, Cal.

Describes all the newest discoveries in the art, by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive shape.—Signal, Napoleon, O.

It embraces every subject that will interest the beginner. It describes all the newest discoveries in the art by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive form. It is embellished with beautiful engravings, and is the most perfect work of the kind, for the price, that has ever come under our notice.—Farmer, Lancaster, Pa.

PRICE—Bound in cloth, **75 cents;** in paper covers, **50 cents**, postpaid.

THOMAS G. NEWMAN,
925 W. Madison St., Chicago, Ill.

☞ **A Liberal Discount to Dealers by the Dozen or Hundred.**

OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

VOL. XIX. CHICAGO, ILL., AUGUST 1, 1883. No. 31.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

Detecting Glucose Adulterations.

We have received from the Rev. L. L. Langstroth, the following letter concerning the recent discovery of the new phase of the glucose abomination:

OXFORD, O., July 20, 1883.

FRIEND NEWMAN:—I enclose you what I hope will prove a good way of detecting glucose adulterations. I have the promise of some glucosed maple sugar bought in the open market, which will be soon tested. We propose to move all along upon the enemies' lines. I am aware that these exposures must, for a time, to a certain extent, injure the honey trade; but they are necessary, and in the end will help it. If bee-keepers kept silence, where would these frauds stop? The good old AMERICAN BEE JOURNAL has done much honest work in this matter. How long will it take to excite a State or the whole country if a President, or even a Senator or Governor is to be elected, so that vast sums can be raised for election expenses, and yet the people rest almost passive upon the immense frauds of adulterators, who are often destroying health and even life! It is hard to move us in this matter, but the steam of a righteous indignation is making, and its power will be felt.

Please correct the only important error of the press in my last communication. I said, "for we do *not* believe that this company is a sinner above all others," etc., and the types made me say, "we do believe," etc. Mr. McCord and myself do not wish to make personal attacks upon any one, or to single out any one concern. If any of the many glucose manufactories feel agrieved by our exposure, it cannot be helped. Again, I challenge them, or any of their advocates, to name for what *legitimate* purposes the immense quantities of glucose products are used. I ask them if they dare to say to what uses they are actually put. We wish "the truth, the whole truth, and nothing but the truth."

L. L. LANGSTROTH.

The letter referred to by Mr. Langstroth, with the method of testing honey, syrups, etc., by Prof. B. F. Marsh, of the Miami University Training School, is as follows:

OXFORD, O., July 18, 1883.

DEAR SIR:—In answer to your request that I should indicate some easy method by means of which impurities in glucose, syrups, etc., could be detected, I submit the following.

The impurities most common in manufactured glucose are calcic sulphate, known as sulphate of lime, and sulphuric acid. Calcic sulphate is insoluble in alcohol. If, therefore, a drop of glucose containing any of the above salt be thoroughly mixed by shaking in a glass vessel with four or five tablespoonsfuls of strong alcohol, a white precipitate of calcic sulphate will appear and make the solution milky. The above test is generally all that is necessary to detect the presence of the sulphate of lime. It may be necessary. sometimes, to add a drop or two of sulphuric acid to the solution before the precipitate will appear.

For the detection of sulphuric acid, a drop or two of the suspected glucose is to be placed in a glass vessel and dissolved in two or three tablespoonfuls of water. Add a few drops of chloride of barium to the solution, when, if sulphuric acid is present in considerable quantity, a white precipitate will appear and make the solution milky. This test will generally be all that is necessary to indicate the presence of sulphuric acid in glucose. When the acid is present only in minute quantities, it will be necessary to add to the solution of glucose and water, a drop or two of dilute chlorhydric or muriatic acid before adding the chloride of barium. In making the tests, rain water should be used. It is hardly necessary for me to add that pure honey contains no lime or sulphuric acid. There is, however, in all pure honey, a slight trace of formic acid which is secreted by the bee; but this acid will not interfere with the tests which are indicated above.

With great respect, I am,

Yours Truly, B. F. MARSH.

Rev. L. L. LANGSTROTH, Oxford, O.

It will be remembered that the glucose manufacturers wrote to Mr. McCord that "they feed it [glucose] very largely in California, and make money out of it." Mr. Wm. Muth-Rasmussen has sent us the following very emphatic denial of the accusation:

MR. EDITOR:—I have just read Mr. Langstroth's article with your comments on page 341, AMERICAN BEE JOURNAL.

Allow me to say, that during my 14 years' experience in the bee business in California, I have never seen glucose, nor have I among my large number of bee-keeping acquaintances found any who ever had. I know of bee-keepers, who in seasons of drouth bought honey in San Francisco to feed to their bees to save them from starvation. They paid 7 cents *and* freight for honey which they had sold the previous year for 5 cents. Others bought grapes at the vineyards and hauled load after load to the mountain apiaries to save the bees. I never heard of grape sugar being used for that purpose, though it is not impossible. But the assertion, that "they feed it (glucose) very largely in California, and make money out of it," I shall not hesitate to pronounce in the meaning it is intended to convey, as *an unmitigated lie.*

I doubt that glucose or grape sugar either can be found in this State outside of San Francisco. I believe it is used there by packing firms, as it is but a short time since I saw in one of the stores here a small can of honey which had been there for 6 years, and was still liquid. The "honey" was rather dark, of inferior flavor, and thinner than good honey ought to be, still it was labeled "Orange Blossom Honey," "Warranted Pure." Two bare-faced lies on each can. Every one familiar with southern California knows that bees never get orange-blossom honey to amount to anything. The orchards are too far from the apiaries, and the orange tree blooms in the winter and early spring, when bees never fly far in search of food.

The price of honey in California is governed by the price in the eastern States, deducting freight, commission and other incidental expenses. Any one can, therefore, by looking at the quotations in the bee papers see that a man is not liable to grow rich by the bee business here. You cannot, Mr. Editor, more than I regret that another drawback should be added to the often precarious living of the

California bee-keeper, by the false assertions of this "Grape Sugar Co."

I enclose a clipping from the *Pacific Rural Press*, March 24, 1883, by which you will see that a new sweetening compound has been invented, and is going to be used to *adulterate glucose* with. Can you, or any of our scientific bee-keepers, tell us anything further about this "benzoic sulphide?"

WM. MUTH-RASMUSSEN.

Independence, Cal., July 19, 1883.

The following is the new compound for *adulterating glucose*, mentioned by Mr. Muth-Rasmussen:

A NEW SWEET COMPOUND.—C. Fahlberg, in a paper read before the Franklin Institute, Jan. 17, furnishes some interesting particulars in relation to his discovery of a certain sweet compound in the hydrocarbon of the coal tar group. He describes the sweetness as being very intense. As soon as he made the discovery, he proceeded at once to determine whether it was poisonous to take it in larger quantities or not. At first a cat and then a dog were subjected to experiment, but they remaining alive and apparently not in the slightest degree affected by it, the discoverer decided to take several grammes of it himself. The result was not the slightest inconvenience experienced from it. A chemical test of the urine, made the next morning, showed that almost the entire quantity taken could be thus recovered.

The compound obtained, and which contained the sweet principle, forms salts with any carbonate of the alkalies, alkaline, earths or metals and all of which taste sweet. It is, however, not an acid, but belongs to a class of bodies to which the name "Sulphines" has been given; the compound in question being benzoic sulphide. It is very readily soluble in alcohol, more so than in cold water, in which it only dissolves readily when it is hot. The discoverer says: "I am making the attempt now to prepare it in larger quantities, and by cheaper methods, and have no doubt that it will find extensive use in medicine and for techinal purposes. One experiment made was to sweeten glucose, which, as you all know, tastes only faintly sweet, and the result was a complete success. As soon as I shall have found the method by which to prepare it on a manufacturing scale, I shall come before you again, and as I trust and hope, with larger samples than now, ready to give answer to all questions in regard to its price, application, etc."

This "benzoic sulphide" is new to us, and, if its career is to be anything like its twin-fraud—glucose—it were better if it should be consigned to eternal oblivion.

☞ Do not let your numbers of the BEE JOURNAL for 1883 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

Bee and Honey Show at Toledo, O.

The Tri-State Fair (Ohio, Michigan and Indiana) will be held at Toledo, O., Sept. 10 to 15, 1883. The following is the list of premiums in the Apiary Department, of which Dr. A. B. Mason, of Wagon Works, O., is the superintendent:

	1st. Prem.	2d. Prem.
Display comb honey in most marketable shape, product of one apiary in 1883......	$10	$5
Display extracted honey in most marketable shape, product of one apiary in 1883........................	10	5
Display extracted honey in most marketable shape, by a lady, product of her own apiary in 1883............	5	3
Display comb honey in most marketable shape, by a lady, product of her own apiary in 1883............	5	3
Comb honey in most marketable shape, not less thau 20 lbs., quality to govern.	4	2
Extracted honey in most marketable shape, not less than 20 lbs., quality to govern	4	2
Crate or case comb honey, not less than 20 lbs., in best shape for shipping and retailing..............	4	2
Colony bees...	5	3
" Italian bees.........	5	3
" Syrian bees..........	5	3

Colonies of bees must be the progeny of one queen, and exhibited in such shape as to be readily seen on two sides. Purity of race, docility, size of bees, and numerical strength to be considered.

Display of qneens, put up in such shape as to be readily seen by visitors; blacks not to compete............	3	2
Greatest variety of queens put up as in display of queens.....................	3	2

Queens and colonies cannot compete for more than one premium.

Bee hive for all purposes in the apiary, may be represented by a model not less than half size............	3	2
Bee hive, glass.............	2	1
Wax extractor.............	2	1
Honey extractor............	2	1
Foundation mill............	5	3
Foundation press...........	5	3
Beeswax, not less than 10 lbs	2	1
Comb foundation for brood-chamber, not less than 5 lbs.........................	2	1
Comb foundation for surplus honey, not less than 3 lbs.	2	1
Comb foundation machine making the best foundation for brood-chamber on the grounds................	8	4
One piece sections, not less than 50....................	1	50c
Dovetailed sections, not less then 50....................	1	50c
Packages with labels for retailing extracted honey...	1	50c
Bee smoker.................	1	50c
Honey knife.................	1	50c
Package for shipping extracted honey in bulk	1	50c
Machine for making holes in frames for wiring......	2	1
Machine for wiring frames.	2	1
Display apiarian supplies...	3	1
Quinces preserved with honey.....................	2	1
Peaches preserved with honey......................	2	1
Apples preserved with honey	2	1
Pears preserved with honey	2	1
Largest and best collection of bee literature..........	2	1
Largest and best display of honey bearing plants, properly named and labeled...	10	5
Queen cage, such as is admitted to the mails by the postal laws...............	1	0
Honey vinegar, not less than one gallon................	2	1
Honey cake, with recipe for making..................	4	2

Bee and Honey Show.—The twenty-third St. Louis Fair opens Monday, Oct. 1, and closes Saturday, Oct. 6, 1883, and offers premiums, $50,000. The following are the premiums for Bees and Honey:

Best display of Italian bees	$20
" display of black native bees	20
Best imported queen......	10
" display of comb honey 25 lbs....................	Dip. and 10
Best crate of honey in comb	L.S. Med.
" bee hive for all purposes	Dip.
" honey extractor........	Dip.
" wax extractor..........	Dip.
" bee smoker............	Dip.
" honey knife.......	Dip.
" bee veil or face protector........................	Dip.
Best display of apiarian implements..............	1st Dip. & $25 2d L. S. Med.

The secretary writes us as follows: "We make no charge for entry or space, and will allow the sale of products, provided a neat display is made, and stock is replenished, during the entire week. We contemplate allotting a building exclusively to this department."

☞ Mr. J. F. Tearman, of Lincoln, Ill., has sent us a copy of the Premium List of the Fair to be held at Lincoln, Ill., on Aug. 27 to 31. The following are premiums for "bees and honey"—just three; no more and no less—the whole amount of premiums being but just $18. Let us hope that heretofore they have offered none, and that this is their first effort:

	1st.	2d.
Bee hive containing colony of bees.....................	$5 00	$2 50
Display of apiarian supplies	5 00	2 50
Five pounds of honey in comb.....................	2 00	1 00

Bee and Honey Exhibition.

There will be held, at the Southern Exposition, August 28 to September 1, under the direction of the Agricultural Committee, an exhibition of bees and honey, when the following premiums will be awarded :

1. For best exhibit of Italian bees in observatory hive	
First	$ 25 00
Second	15 00
2. For best 50 to 100 pounds of comb honey produced in Kentucky in best shape for retail trade or for family use	
First	20 00
Second	10 00
3. For 50 to 100 pounds of extracted honey produced in Kentucky in best shape for retail trade or for family use	
First	20 00
Second	10 00

NOTE.—The premiums No. 2 and No. 3 above are offered by the State of Kentucky through Hon. Chas. E. Bowman, Commissioner of Agriculture, and are confined to the products of Kentucky.

RULES OF THE EXHIBITION.

1. The exhibition will be in charge of the Superintendent of the Agricultural department.
2. Bees in observatory hives must be so confined that they shall not have exit in the Exposition building.
3. Table room for the exhibits will be provided by the Superintendent.
4. Articles for exhibition sent by express must be directed to the Southern Exposition, marked "Bee Exhibition," and charges must be prepaid.
5. Exhibitors will be admitted free on August 28 and 29.
6. All exhibits must be entered and placed upon the tables by 1 o'clock p. m., August 28, at which time judges will award the premiums.
7. Judges will be appointed by the Agricultural Committee.
8. The premiums will be paid in cash.

The National Convention.

The National Bee-Keepers' Association, will hold its Annual Convention in the City Hall and Council Chamber in the city of Toronto, on Tuesday, Wednesday and Thursday, the 18th, 19th and 20th days of September, during the second week of Canada's Great Fair. All the railroads in Canada will issue tickets during this week, good to return, up to Saturday night 22d, at single fare for the round trip. Special excursion rates will be arranged from various parts of the United States, of which due notice will be given. Those who intend being present may be kept posted on the latest excursion rates, etc., by addresssng me, and also that I may arrange hotel accommodation. Private lodgings will, if possible, be secured for those who desire it, and every effort will be made to make everybody comfortable. A grand meeting is anticipated.

D. A. JONES, *President.*

☞ Articles for publication must be written on a separate piece of paper from items of business.

The Honey Flow.

Mrs. L. Harrison, in the *Prairie Farmer*, makes this statement of the case :

The flow of nectar from white clover still continues, and judging from recent rains, it appears as though there would be no interim between its bloom and fall flowers. Some bee-keepers of this State report "honey dripping from their garments," and this is literally true of those who extract. The flow of honey, this season, has not been continuous, but off and on, resulting in the rearing of multitudes of bees. When swarming has been controlled to the extent of keeping all hives full to overflowing with bees, satisfactory results in honey will be obtained.

Dio Lewis' Monthly is the title of a new serial, the first number of which is on our desk. It is a handsome magazine printed in clear type, and is devoted to health and hygene. It is published by Clark Bros., 68 Bible House, New York, at $2.50 a year. The editor remarks as follows :

It is conceded that the cloud overhanging this wonderful land is the doubtful health of its people. With good digestion and good nerves we can more than realize the world's brightest hopes. The aim of this magazine is to popularize sanitary science. We shall strive to make the subject of the health of our bodies as simple and interesting as a story.

☞ The pamphlet, "Honey, as Food and Medicine," is in such demand, that we find it necessary to print them in still larger quantities, and can, therefore, still further reduce the price, as noted on page 387. Let them be scattered like "autumn leaves," and the result, we feel sure, will fully reward honey-producers for both the labor and the small expense.

St. Joseph, Mo., Honey Show.—We notice by the St. Joseph *Gazette* that Mr. D. G. Parker is again appointed superintendent of the apiarian department of the St. Joseph Exposition. We hope it will be a grand success.

☞ Last spring Mr. D. C. Talbot described his "Comb Foundation Fastener" in the BEE JOURNAL, and afterwards advertised it for sale. Now we have two complaints from parties that have sent for, but, so far, have not received it. We have written him twice about the matter, and getting no reply, we fear there is something wrong, and now publicly ask for an explanation.

Postage on Queens to Canada.—On any package of merchandise sent to Canada, of 8 ounces or less, the postage is 10 cents. Queens, therefore, cannot be sent for less than 10 cents each. Canadians ordering queens from the United States, should add 10 cents for each queen, if they are to be sent by mail, for that extra 10 cents will usually eat up all the profits on queen bees, if they are reared as they should be.

☞ The new two cent rate of postage for letters goes into effect on October 1. Three cent postage stamps will then be but little used. For all fractions of a dollar sent to us hereafter we should prefer either *one-cent*, or else five or ten-cent postage stamps. Do not send coins in any letter.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., July 30, 1883.

The following are the latest quotations for honey and beeswax received up to this hour :

CINCINNATI.

HONEY—Extracted honey commences to come in freely, and a large crop is reported from all quarters. The demand is very good, and keeps pace with the arrivals. For choice extracted honey I pay 7@10c ; the latter price for choice clover. I have received several nice lots of comb honey, for which we paid 15@16c on arrival.

BEESWAX.—Arrivals of beeswax are plentiful. We pay 32c. for a good article on arrival.

CHAS. F. MUTH.

NEW YORK.

HONEY.—Best clover in 1-lb. sections (no glass) 20@21c.; in 2-lb. sections (glassed) 18@20c. Fair quality, 1 and 2-lb. sections, 16@17c Extracted, white, in small barrels, 10@11c.; buckwheat, 8@8½c.

BEESWAX.—Is more plentiful. Prime yellow sells at 36½c.

H. K. & F. B. THURBER & CO.

CHICAGO.

HONEY—New crop of comb honey is being offered, and some sales of it have been made at 16@18c in 1 and 1¾ frames. The receipts of extracted are liberal, and there is a good deal of complaint about unripe honey; consumers holding off. Market, 9@10c for white. Very little dark left, and some inquiry for it.

BEESWAX—30@35c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY.—New extracted is arriving freely—selling for 7 and 8 cts. New comb coming forward slowly ; extra white, 16c.

BEESWAX.—No beeswax in the market.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY.—Considerable new arriving, and selling in lots at 7½@7¼c for extracted in cans; 14@15c for comb. Old and all poorer offerings neglected and nominal.

BEESWAX.—Easy, but sold mainly at 29@30c.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY—There is a very good demand for new white honey at 18@20c. for 1 lb. sections; 2 lb. new 17@18c.; old, 15@16c. No extracted has been received, and none seems wanted in our market.

BEESWAX—32@35c.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—Our supply is gone; we have none to quote.

CROCKER & BLAKE, 57 Chatham Street.

CORRESPONDENCE

For the American Bee Journal.

That "Long Idea" Hive.

G. M. DOOLITTLE.

On page 223, A. W. R. asks why I do not adopt and practice the method used in getting the 566 pounds of extracted honey spoken of on page 115. Ten or more years ago D. L. Adair, of Kentucky, was quite a prominent bee-keeper and writer for the bee papers. He used and advocated a long hive to be used on the principle of spreading the frames out horizontally instead of tiering one hive above the other, claiming that, thereby, a colony of bees could be kept in a normal condition, and while in said condition no swarming would be the result. This hive he termed the "long idea" hive. Being always ready to test all the "new ideas," I made two hives four feet long, during the winter of 1873, but did not put them in use until the summer of 1877. One of these I worked for extracted honey, as given on page 115, and the other for comb honey, on Mr. Adair's plan.

The one worked for comb honey swarmed, and after repeated trials to keep them at work in the 4-foot hive, I let them have their own way when they had swarmed for the fifth time, and hived them in an empty hive.

The one worked for extracted honey did splendidly, but another worked on the "tiering up" plan did nearly as well, and by practical knowledge I learned that I could work a two or three story hive much more easily than I could this long one. To take the frames out, the person's back must be bent just enough to make it the hardest kind of work, and the bees which were shaken off the combs would crawl all over the sides and top of the hive in such numbers as to make it almost impossible to close it again. With the two story hive the bees could be shaken on top of the frames in the lower hive, when they would crowd below until the hive was closed, and the operator could stand erect while at work at the hive. But the worst thing about it was that I lost both colonies during the next winter, after fixing them in good shape for winter, as I considered. I have tried the hives since with no better success, so have torn them to pieces and made others of them.

A. W. R. further wants to know "what became of the 70,000 workers in winter." As the honey season drew to a close, or about the first of August, the queen ceased to lay in all but about six of the central frames, so that by the first of November the hive contained no more bees than others having only nine frames during the season. The worker bee lives but about 45 days during the summer months, hence it comes to pass, as soon as the queen ceases her extra prolificness, that the workers rapidly diminish, till but an ordinary colony exists for winter. He that over-rules all things made the honey bees so that as summer approaches their instinct leads them to usher a host of bees into existence to gather the honey about to be secreted, and as this passes by, the same instinct leads them to prepare for winter, by decreasing their numbers. In this, as well as in many other things, we see how perfect was the work of the Creator.

Borodino, N. Y.

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Michigan Farmer.

Selecting Location Before Swarming.

PROF. A. J. COOK.

I send you this interesting letter of Mr. F. E. Delano's, one of our graduates, and a farmer at Oxford, Mich. A case almost identical is reported from England. This seems to prove that scouts are sent out before swarming to pre-empt the future home, and that clustering just after the swarm issues, is not to give time to look up a home, but more probably to give the queen, which has not tried her wings for months—probably years—a brief rest after the short flight, from hive to cluster, before the longer one is commenced.

OXFORD, June 24, 1883.

To Prof. A. J. Cook.

As you are now interested in imparting what is known about the "little busy bee" to those who are still nervous about shaking hands with them, and still more so about having them tenants of the same house. I will tell you of an interesting occurrence that has taken place here, and in which a swarm of bees are especially interested. We are engaged in rebuilding a part of our house; the upright has not been torn down, and on the side where we are putting up the new part the joists run through the wall. There happened to be some holes next to the ends of two or three. Friday afternoon it was very warm; for a long time I had noticed that there were bees around the house, and had made some casual remarks concerning them, but paid no attention otherwise to their continual hum. Finally we looked around, and found that to all appearances a swarm of bees had gone into the house under the chamber floor. As a swarm of bees make considerable noise when they fly, and as we had heard no unusual or increased amount of humming, we concluded that they must have come when we were at dinner. Again, we could hardly credit that conclusion, for it was half-past three before we had heard a bee at all. That night all we could do was to make conjectures concerning their arrival. The mystery was satisfactorily explained about 9 o'clock Saturday morning. About half-past eight we noticed that there was not a bee around, so did not know but that they had left. Well, they had, but not for good, for about nine the swarm really came, and this time they made noise enough. It was a big swarm, too. Now, for the conclusion: The bees that came Friday were either a scouting party sent in advance, or else they came to clean out and make ready, which, I do not know; but think probably the place had been selected before, and that this regiment had been sent on to make ready for the swarm, for they were very busy until night. Then Saturday morning the regiment went back and piloted the swarm to the new found home.

Whether the swarm came direct here from the hive or not, I do not know. There are bees kept three-quarters of a mile south of here. I shall go and see if a swarm left there Saturday morning.

This is positive proof in this case, and I suppose it is so in all, or most at least, that the place is selected before the swarm go to it. I have been minute in my description because the circumstance was interesting, and I never remember of reading or hearing anything positive in regard to the matter before.

FRED E. DELANO.

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For the American Bee Journal.

The Traffic in Queens.

JAMES HEDDON.

Some 20 years ago a new race of bees was introduced to American apiarists. This race was called Italian. They were plainly and distinctly marked physically, and possessed also distinct traits of character. Some of their characteristics were, when compared with our old-time tried Germans, found to be superior, and some inferior. The common voice of the majority of apiarists pronounced them best, all points considered. Then came a demand for these bees. It was found that they readily lived and mingled with our Germans, and that to put an Italian queen in the place of a German queen, would change the whole colony in a few weeks. Then there came a demand for queens.

The rearing of queens to fill that demand was the next effect. The breeder began to select colonies of pure Italians to breed from, and as he had more than one pure colony, he began to look about for some way to decide which colony he should use. There is not on record a case where a cent was thrown up, "heads or tails," to settle on the colony to select eggs or cells from. Quicker than a flash the master's good sense said, "this one gathers the most honey, and behaves the best, and, of course, I shall use it." Then and there a new system of breeding was born. "Spontaneous generation." Breeding for qualities began, never to cease as long as man and bees remain in partnership in the production of honey. Years rolled on, and no one thought of improving any race of bees except the Italian.

Quite often controversies came up as to which race was, "taken all in all," the best. Then the good and bad qualities of both were ably shown up. When looking at this picture, thoughtful bee keepers carefully weighed the good and bad points, and struck a balance; some said "the Germans are the best," more said "the Italians are best." Acquisitive honey-producers said, "Why can't we combine the good qualities of both races?" Determined breeders said, "We can and we will," and now. queens bred for qualities, and not for the purity of any race, are pouring through the mails like streams through a desert.

At last, in spite of all mistaken and interested opposition, the time has come when the leading honey-producers of this country can use and sell the same stock—the bees of their choice. I have private means of accurately estimating the popular public sentiment of to-day regarding this subject; also its growth during the last few years. I predict a glorious future for the development of "*Apis-Americana*." At last, in the traffic of queens, the breeder finds honesty and interest together.

Before I close I wish to say a few words regarding what kind of queens are best for purchasers to buy. If one is so well satisfied that he has his eye on the strain of bees he is going to possess, I know of no way better than to buy untested queens and put one at the head of each colony. I did this with 40 colonies in 1871, and paid $2 each; but if, on the other hand, the purchaser wishes to test the strain before changing to it, or for any reason sees fit to rear his own queens, he should by all means order one, or as many more as he can afford, of tested queens. They will prove much the cheapest in the end, as every breeder very well knows. The idea of purchasing one untested queen to test a strain by, is preposterous in itself. I am of the opinion that the more tested and less untested queens are purchased, the faster we shall march toward that coming bee. No man should ever breed from an untested colony.

Dowagiac, Mich., July 16, 1883.

For the American Bee Journal.

Combs Built in Wired Frames.

T. A. HOUGAS.

In regard to the impracticability of wiring frames except for foundation, is fully settled in my mind. I should not do so, as I consider it but a waste of time and money. This spring I experimented on this in two ways.

1. I placed wired frames, and frames with full sheets of foundation alternately.

2. With nothing but wired frames in the hive.

In the former they built the combs from top to bottom of the frames in strips, not averaging over 1½ inches wide. The wire was precisely in the centre of the comb in each and every case. They did not seem to want to unite these combs (there was two or three of these combs in each frame), so as to make the frame solid, but would leave large openings in them.

In the latter they seemed to be bewildered. Some combs they built properly, while with others the wires seemed to be in the way. In one case they built exactly at right angles with the frames. In one case a line of drone cells was built on either side the wire the full length of the comb.

In another instance I wired a frame and filled it with foundation just half way down from the top-bar. They drew out the half sheet and a full sheet on the outside of a division-board before they completed the half-filled frame.

After thus experimenting, I have concluded that it would be utterly useless, if not more than useless to wire a frame unless you fill it with foundation. I agree with Mr. Heddon, that it is impractical.

Henderson, Iowa, July 16, 1883.

For the American Bee Journal.

Experiences of a Novice.

BY A NOVICE.

This article is headed thus, so that old bee-keepers may skip over it. It is written by a novice for novices.

I bought a colony of bees late in the spring; a strong colony. The hive was called a Langstroth, or I should not have bought the bees. Not liking the old unpainted hive, I sold it to the man who sold me the bees. After a fortnight, according to agreement, I attempted to transfer the bees to a new Langstroth hive, when I found the bar of the frames half an inch too long to set in my hive. I, however, succeeded by putting one end of the bar in its proper place, and allowing the other end to rest on the top of the brood-chamber.

The combs were very thick and irregular, and were half full of honey. After a while the hive became too full of bees, and not being able to secure an experienced hand to divide them, I placed a new hive about 8 feet from the full colony, and then exchanged their places. Took two thick-combed frames of bees from the full colony and put them into the new with a frame of foundation on each side, and a division-board. I could not find the old queen, so I chose a frame with a queen-cell, and left in the other hive a queen-cell.

In a few weeks the old colony seemed again to be in need of being divided. I had replaced foundation frames where I had taken the frames of bees. These had cells, and were covered with bees. This time I secured the services of an experienced bee-keeper. He took the full hive about 2½ rods away, and put the new hive where the old one had stood, and put with it two frames of bees, and a frame of foundation on each side; but he could find no queen. The next day not more than 200 bees remained in the new hive, the rest returned, I think, to the old one, so now I propose to put the two new colonies together. When the last division was made, I found the honey all gone, and commenced feeding them, near the entrance, with syrup from granulated sugar, but the flies took half of it.

On inquiry I found a better way was to soak a slice of corn bread in the syrup and put it on the frames under the cloth and cap. Yesterday, I tried the plan, and with such benevolent intentions I thought I need not take the veil nor smoker, but I carelessly irritated the bees, and three of them felt called upon to teach me to be more gentle. I had, before this time, put into my vest pocket a vial of carbonic ammonia, and was now anxious to try its virtues. I did so, but this morning I have a very large fat hand. I am now ready to try another prescription. The veil and smoker soon set things all right.

By the way, I had prepared 40 sheets of paper with nitre, and rolled up with one sheet some cotton rags and wood, put it into the smoker and lit it with a match, but being in a hurry my match fell down upon the rest of the paper, which I threw upon the ground to stamp out the fire, but did not succeed. I have since prepared more, and thank Mr. Higbee for his information in the Weekly BEE JOURNAL. These experiments have taught me several things:

1. Always treat the honey bee gently and respectfully.
2. Always use a smoker and veil when handling bees.
3. Prepare the smoker as recommended by D. Higbee.
4. Never depend on powdered carbonic ammonia.

Steele City.

For the American Bee Journal.

Bees in Washington Territory.

C. THEILMANN.

I have just come home a trip from Medical Lake, Washington Territory, the great bathing resort of Spokane county, where hundreds of people have restored their health by the waters of Medical Lake, of which I am one that was cured of many years' billiousness.

Traveling considerably in the Territory, I have only found bees in the vicinity of Walla Walla. They seem to do splendidly, and are gathering a good deal of honey there, but the bee-keepers do not manage them very well. I only saw one (an Iowa man) that had some kind of movable frames in his hives, though very poorly gotten up. All the rest that I saw, had their bees in box hives, and did not know how to get any honey, unless they brimstoned the bees in the fall.

Walla Walla valley seems to be well adopted for bee-keeping, as they hardly ever lose any colonies in winter, for the winters are generally very mild.

I purchased 2 colonies, the only two the man had which would not offer to sting in handling, and transferred them 150 miles North, to the lake above mentioned, and are the first bees that have ever been taken North of Snake river; they are gray-looking bees, different from the rest I saw around Walla Walla, but I saw such bees last year while traveling through Arizona. How those gray bees reached

Walla Walla I cannot ascertain; all I know is that they do not offer to sting, for all that, they have stings as well as other bees. I would like to get some information about the gray Arizona bees, through the BEE JOURNAL, about their habits, etc.

My bees here are doing well. White clover has been better than ever heretofore, and basswood has just commenced to bloom a day or so ago, and promises a large yield.

I have just received a letter from my son, written 10 days after I left Medical Lake, saying that these gentle bees are doing nicely. He is living at the Lake and is attending to them.

Theilmanton, Minn., July 19, 1883.

[Will some one in the Territories please reply to the above? Are they not the same grey bees that are found in the South?—ED.]

For the American Bee Journal.

Bee Notes from Mississippi.

O. F. BLEDSOE.

My bees are doing well this season, and are profitable in pecuniary returns, though I cannot yet obtain results to compare with those of some Northern bee-keepers. I am, however, encouraged in the business. I am satisfied that in this locality, and almost anywhere in the South, there is each year ample honey flow to make bee-culture profitable. The great problem with me is the best method for controlling the swarming fever.

It is difficult here to keep bees at the point, in strength, at which they will make comb and seal comb honey, and yet not swarm. My plan is to shade, ventilate, remove all drone comb, to provide ample room to cluster and build comb at the sides, confining the brood nest by division boards, and to remove all sections from the top as soon as sealed over. I clip one wing of every queen. If a swarm issues and I do not desire to put it in a new hive, I let it return and remove the queen, or return her to the hive caged. On the seventh day after swarming, I open the hive and cut out all queen cells. Nearly all the brood will by this time be sealed over, but lest the bees will take some of the youngest unsealed larvæ and try to make a queen, I select five of the youngest queen cells and put them back directly over the brood nest in the place of a section box, which has been taken out for the purpose. After two days more, I remove all these queen cells and let out the queen, or, if the queen has been taken from them, remove all the cells but one. Under these circumstances, the bees are compelled to stay and go to work, and, if ample room is given, will not often swarm again, especially if they have a young queen from a cell left to them. As fast as new comb is made in the frames at the sides, it is cut out while still white and pure, the honey extracted, and the comb used in section boxes.

I can get much more, and more beautiful comb in this way, than if I put section boxes at the sides in the brood frames. The bees are quicker to go to work in common frames with good starters or foundation; more bees can get to work, and, the building-clusters being more continuous, they make more rapid progress.

The frame I have adopted is a shortened Langstroth frame, that fits exactly in the Langstroth hive when turned round, and the entrance put in one of the sides; dimensions of the frame, 13⅜x9⅛. A broad frame of these dimensions will hold exactly six 4¼x4¼ sections. Nine of these frames in brood nest take 999½ square inches of comb, the Doolittle standard for brood nest being 1,000 square inches of comb. If those who use Langstroth hives should use these short frames for awhile, they would not insist on a frame 17⅝x9⅛ as the best for a standard. The Langstroth frame is certainly of the proper depth to obtain the best results in comb honey, but for many reasons it is too long; and, among others that it does not admit of the proper arrangements for the side-building of comb, and this is certainly the correct principle in the production of comb honey.

Grenada, Miss., July 24, 1883.

For the American Bee Journal.

The Honey Crop Not a Large One.

J. L. GRAY.

Please allow me to protest against the almost universal practice of writers in bee papers (especially those who have kept bees only for a short time) of exaggerating the bee business in general, and the present crop of honey in particular. This gives honey dealers the impression that the markets are about to be flooded with the largest crop of honey ever known. The bee papers are full of glowing accounts of the wonderful yields in certain parts of the country, while those that are getting light yields, or none at all, do not report; the dealers only seeing one side of the report, take it for granted that they can safely cut the prices, and are not slow to do so.

The crop of honey in this part of the country is away below an average, so far this season; some of the most successful apiarists not having secured any surplus as yet, and clover and basswood are nearly over.

Mr. James Heddon has, for years, manfully fought against this and kindred wrongs; he has stood unaided, and almost alone, against the practice of many who coax, yes, almost pull everybody into a business already crowded; he has been called selfish, because after he had been to a great expense, and had devoted the best years of his life to make a success of what these same outsiders had laughed at. He protested against trying to persuade everybody—invalids, cripples, and lazy good-for-nothings to step in and overstock a pasture he has by all means the best right to.

I know how this works, for I have had a practical illustration with one of the kind who thinks that the more swarms he gets the more successful he is. It is not selfish for a person to look first to his own interests, and secondly to mankind in general.

What would we think of a doctor, lawyer or merchant who would continually try to convince others that his was the best paying business, and want everybody to open a store or office and take part of his trade or practice from him. I would think him "short of wit," but I suppose others might say he was selfish, if he did not do this.

Lee Centre, Ill., July 25, 1883.

[We give place to the above *at once*, so that the "protest" may have its full weight. It is, of course, useless to think of deceiving any shrewd business men, either by "talking up" or "talking down" the size of the honey crop. The quantity, be it either large or small, offered for sale, decides the matter and makes the "exact truth" known.

The BEE JOURNAL has, on every every occasion, discouraged the idea that the business of keeping bees was fit for the lazy, invalids, etc., and does not believe in *tempting* any one to keep bees—but any *selfish* policy will in the end defeat itself.—ED.]

For the American Bee Journal.

Bee-Keeping in Canada.

EDWARD MOORE.

Last fall I put 3 hives of bees into a box, packed with sawdust, but not packed as I would like, my means being very limited, and, at the proper time for packing, I was working, and could not attend to the bees. In the spring, when I opened the box, one colony was dead, and the other two very weak in numbers. The first opportunity I had, I united them, and the first flight they had, I saw they had the dysentery badly, but I allowed them a few flights. They were lively and active, and soon overcame that. Later I searched 2 or 3 times for the queen, but could see none; seeing hybrid queens advertised for sale, I thought I could do no better, so I sent for one, and received it all right. Taking the netting off the little hole of the queen's cage, I plugged it up with beeswax, and laid it on the top of the frames; sometime after, on looking, I saw the wax was gone, so was the queen. I closed up the hive. (It was on the 14th of June I received the queen.) As they were so weak in the spring, I expected no swarm this summer, but on July 3, they swarmed, and by appearances would more than fill a gallon measure; so there must have been a queen, for had the queen I put on the frames been received at once, and begun to lay immediately, the earliest hatched could not have been before the 5th; besides the queen was a hybrid. To-day, July 12, I had a second swarm, considerably smaller than the first, but enough to build up well before the fall.

Soon after warm weather set in, we had, and continue to have, considerable rain, so much so that a great deal of the cultivated land is like a marsh, and we have rain the greater part of the time, both day and night. There is an abundance of clover bloom, but the bees can get out but little, and, I suppose, that if they could, there would be but little nectar to gather, but we must hope for better things before long.

We have had a few warm dry days, and the subjects of this correspondence are as busy as bees. July 12, was warm and cloudy, still not by any means entirely overcast. Toward evening it darkened down, began to thunder, with heavy rain again, and is a critical time yet, I fear, for honey gathering.

On Saturday 14th, I had another small swarm. I think of acting as near as I can up to the instructions of Prof. Cook with respect to rearing a queen or two, to have ready if needed.

Barrie, Ont., July 14, 1883.

For the American Bee Journal.

A Word to Iowa Bee-Keepers.

O. CLUTE.

By invitation of the Executive Committee, I attended the annual winter meeting of the Iowa Agricultural Society, last January, in Des Moines, and gave a lecture on "Modern bee-keeping." The audience was large, and seemed much interested in the subject.

I was requested also to attend a business meeting of the Executive Committee, and to make a statement as to the importance and prospects of the bee-keeping industry, and of the help the Agricultural Society could give in fostering and developing it. I found the committee to be composed of courteous gentlemen, who were quite willing to do anything reasonable. They asked me to make out a list of premiums to be offered at the State Fair, this fall. It seemed unwise for our infant industry to make too large a demand at first, so I made out a modest and yet honorable list, and submitted it. They adopted it at once. I can see now that it is by no means perfect, yet it will do for a beginning. If the parties interested in bee-keeping will come out in force, and make a good exhibit, we can have a better list of premiums another year. The premiums offered for this year are as follows:

CLASS NO. 128.

Bees, Bee Products and Bee-Keeping Implements.

	1st. Prem.	2d. Prem.
Best bees in observatory hives	$3 00	$2 00
Best and largest display of different races of bees	5 00	2 00
Best comb honey, white clover	5 00	2 00
Best comb honey, linden	5 00	2 00
Best comb honey, fall flowers	5 00	2 00
Best and largest display of comb honey	10 00	5 00
Best extracted honey, white clover	5 00	2 00
Best extracted honey, linden	5 00	2 00
Best extracted honey, fall flowers	5 00	2 00
Best and largest display of extracted honey	10 00	5 00
Best hive for summer	2 00	1 00
Best hive for out-door wintering	2 00	1 00
Best honey extractor	1 00	
Best bee smoker	50	
Best and largest display of bee-keeping implements	5 00	2 00
Best comb foundation for brood combs	2 00	1 00
Best comb foundation for surplus comb honey	2 00	1 00
Best display of honey plants	3 00	2 00

NOTE.—The award of the judge or committee on bee products will be on a scale of 20 points of perfection, as follows: Color 5; quality (taste) 5; neatness of packages 5; and general advantage to purchasers, including facility for handling, 5.

I have examined somewhat carefully the premium lists of many of the State Agricultural Societies, and there is, I think, but one that offers a better list of premiums to bee-keepers. In most cases the premiums are so insignificant as to repel any bee-keeper who respects his calling. The bee-keepers of Iowa should respond to this generous treatment from our Society by coming out to the State Fair in large numbers, and exhibiting their products. Let us show to the State the beauty, the excellence, and the importance of our products.

While this word is addressed especially to the bee-keepers of Iowa, it must not be forgotten that our noble State throws its gates open to all. Competition in all departments is open to the world. All bee-keepers living outside of Iowa will be cordially welcome to the Fair, and their exhibits will be on a par with those from Iowa. It is hoped that many bee-keepers from adjacent States will come and help us.

Iowa is most excellently adapted to the production of honey. Undoubtedly this industry will rapidly develop in importance. If all the newspapers in Iowa will print this article, they will assist in furthering a new business which will soon assume large proportions, and will benefit every section of the State.

Iowa City, Iowa, July 25, 1883.

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☞ We have organized a bee keepers' association at Waco, Texas, known as the "State Central Bee-Keepers' Association. Please give notice in the BEE JOURNAL.

J. W. GUYTON, *Sec.*

Waco, Texas, July 21, 1883.

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☞ The summer meeting of the Cortland, N. Y., Union Bee-Keeper's Association, will be held at Cortland, N. Y., on Tuesday, Aug. 14, 1883.

M. C. BEAN, *Sec.*

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Tiering up the Sections.

Will Mr. James Heddon please answer through the BEE JOURNAL the following questions:

1. What is the cause of bees making drone brood in the sections or boxes above the brood-chamber, on the old colonies, before swarming?
2. Is there any arrangement for putting on tiers of sections, more than one high, so that you can see when the sections are full, without raising up frames?
3. How many tiers high do you think right for a very strong colony?

JAMES SHORTT.

Oak Centre, Wis., July 19, 1883.

ANSWERS.—1. Bees are more desirous of producing drones just before swarming, as they at that time anticipate their immediate use. Drone or store comb has large sized cells, and they are quite apt to build this kind of comb in surplus sections where full pieces of foundation are not used; more especially if there is little drone comb in the brood chamber, which would surely be the case if full sheets of foundation were used there.

2. We use a case of our own peculiar style, which takes one tier of sections. We use this three and sometimes four tiers, or cases, high. To examine the case we remove the cover, and then one case after another, looking into their tops and bottoms. We find this much simpler and easier than any methods, using glass.

3. Answered above.

Italian Bees Turned Black.

What is the cause of my bees changing from Italian to black? Last April, I bought a colony of Italian bees. About the first of June I began to see a few black bees in the colony. To-day, July 16, you cannot see an Italian bee, or one that looks like one. The colony has not swarmed yet. I keep a small apiary of bees, mostly black; they are doing splendidly. I am more than pleased with the BEE JOURNAL. A. P. CHAPIN.

Fenton, Mich., July 16, 1883.

ANSWER.—In reply to your question, I would say that your queen died in the spring. The colony by some means or other became possessed of another. It would seem as though your new queen would produce hybrid bees containing some yellow bands, provided they had reared her from the one deceased, which you bought. It may be barely possible that a black queen entered the hive, and became the reigning queen. I can hardly account for so sudden and radical a change, in any other way.

Heddon Rack.

I see in the last number of the BEE JOURNAL, page 357, that Mr. W. H. Harmer likes the Heddon section rack, and thinks the broad frames will soon be a thing of the past. What kind of section rack does Mr. Heddon use? Does he use the Langstroth hive? Is Mr. Heddon's rack suitable for both one and two-pound sections? Please answer in the BEE JOURNAL. L. FATZINGER.

Janesville, Wis., July 22, 1883.

ANSWER.—In answer to the above question, I will refer Mr. F. to page 659 of the BEE JOURNAL for 1882.

The case represented is for one-pound sections, and the same plan is equally well adapted for sections of other sizes.

Transferring Bees from a Box.

Will it be advisable to take a swarm of bees out of a store box and put them in a hive at this time? The bees swarmed on June 9, and have built the box half full. Please let me know if I can do it and not disturb the bees. GEO. D. RANDENBUSH.

ANSWER.—It is better for the inexperienced to do their transferring in the latter part of May or fore part of June. The harder and stiffer the combs, the better. Still, if properly done, there is no chance of failure in transferring your bees at this time of the year, and new swarms at that, upon the plan given in last week's BEE JOURNAL, page 367.

Moving Bees.

Living in a village, my bees annoy the grocers, and also people in their houses, when flowers fail. Is there any remedy but to move them out of town, if so what? If moved, how far must I take them, not to suffer loss of bees, by removal? Will Mr. Heddon please answer in the Weekly BEE JOURNAL. J. E. FULLER.

Homer, N. Y., July 23, 1883.

ANSWER.—I am not one of those who believe so little in the rights of apiarists and so much in the rights of others as some bee-keepers do; but leaving the opposing rights out of the question, I believe it would well pay you to move your bees out of town, and that is the only practical remedy. I can move my whole apiary at any time of year from one rod to ten miles or over, without any loss resulting. Twice I have moved my whole stock about ten rods, once three-quarters of a mile, and all went well. I will, in the near future, in an article in this paper, tell you how I proceed.

Driving Bees.

I have watched the bees for my father 27 years ago, sometimes as late as August, for swarms. I have since learned that the heat of the season has more to do with their clustering on the outside of the hive than a propensity of swarming, especially so late in the season. About 15 years ago I bought my first colony of bees. I was a reader of the AMERICAN BEE JOURNAL for a few years, when printed in Washington, D. C. When I learned that it had become a weekly journal, I subscribed for it again, and I expect to take it as long as I have one colony of bees. With one or two exceptions, I never wrote a line for it or any other bee paper. As a goodly number of our professed bee-keepers give us their best ideas and new discoveries, I thought I would write a few lines and let the bee fraternity discuss what I believe to be entirely new, at least I never saw a line on the subject. I would like to apply to a practical use a discovery I made. It is this: I succeeded in making a number of swarms to come out of the parent colonies like a natural swarm does. I have done it as late in the day as 4 o'clock. By applying my process they swarm and cluster as any natural swarm does. I would like Mr. Heddon to consider this, and give the readers of the BEE JOURNAL the advantages that could be derived from it. I now have 78 colonies—spring count 25. Most of them in the surplus boxes. I use side and top surplus arrangement. I am not experienced in extracting, but will try it this week. I use a frame 11x12, which, I think, is 1 or 2 inches too deep. I believe a frame 9 inches deep by 12 long about the right size. I wintered on the summer stands last winter, and lost 60 colonies. I blame myself (as I believe all who lose heavily ought to) for losing so many, because I did not give them the proper winter protection. Allow me, in this connection, to ask whether there is among your many readers a person who has ever driven a swarm of bees as mentioned in this item.
J. R. ROEBUCK.

Burton City, Ohio, July 14, 1883.

ANSWER.—Any cheap and practical method by which a colony can be made to cast a swarm at will, would be of great value to the fraternity.

In answer to your last question, I will say that several bee-keepers have reported causing their bees to swarm by inserting a queen-cell in the hive. This result, however, is only a possible one, and cannot be relied upon with any degree of certainty, and, undoubtedly, is entirely impracticable. As far as the size of your frame is concerned, I agree with you that it is too deep, and will say that could I now inaugurate an universal frame, I would, for one or two quite important reasons, make it not over seven inches deep, which is two inches shallower, and I would have it a little longer than the Langstroth frame. But experience in thousands of cases, and in hundreds of apiaries, has demonstrated beyond all doubt, that there is less importance regarding the size of frame as adapted to breeding, wintering and surplus honey-storing than that we have one and the same size frame, in general use. I am always ready and anxious to put to the test all new methods which bid fair to prove valuable adjuncts to the science of apiculture. I would like to know of your method.

SELECTIONS FROM OUR LETTER BOX

Keeping the Colonies Strong.

The basswood has never yielded more honey in one season than this. My hives are 12x22 inches, and 13 inches deep, inside measure. About 12 frames 11 inches square fill a hive. On top of this I put a hive made for wide frames, holding 8 one-pound sections. I keep my colonies very strong, so that they will fill sections rapidly. Perhaps you would like to know how I keep them so strong. Some time before the basswood bloomed, the bees were gaining in stores from white clover; I examined some of the strongest, and found about 6 or 7 queen cells started. I destroyed all I could find in each hive, thinking this would prevent them from swarming for a while; but they built other cells immediately. Then the basswood commenced to bloom and they wanted to swarm; I let about a gallon of bees go out with the queen. I then shut the hive up until the swarming fever was over; I kept destroying all the queen cells in the old hive, except one, until the brood was too old to produce queens. The amount of bees which went with the queen was hardly missed from the old colony. The swarm which was hived I strengthen with hatching brood, when the rush of honey-gathering is over. A part of my hives have just one story, or at least without the sections to extract from, and, after doing so, I keep some of the whitest comb which has no brood it it, take out full sections and fill empty ones with this comb, and put in the place of the full ones.
WICKLIFFE FISHER.

Hamler, O., July 26, 1883.

Never Saw the Like Before.

My 27 colonies in the spring have given 2,700 lbs. of extracted and some comb honey, besides increasing to 65 colonies and some nuclei. Basswood is now in full bloom. I never saw the like in the 18 years I have been in Minnesota.
H. H. ROSEBROCK.

Owatonna, Minn., July 25, 1883.

Queen Laying in the Sections.

My spring yield of honey is over. I took out the last on the latter part of June. The amount from my 60 colonies is 3,000 pounds of extracted honey. I will probably get half as much more in the fall. Is there any way to restrain the bees from making brood in the upper story? My bees seem to have a particular fancy for that this season. Please tell me about the Bokhara clover, whether or not it is very desirable as a honey plant.

M. M. Lindsay.

Fulton, Tenn., July 24, 1882.

[Some use what is called queen excluders—sheets of zinc with holes large enough to admit the workers, but through which the queen cannot pass. Bokhara is the *imported* sweet clover, and is an excellent honey-producer.—Ed.]

Best Honey Harvest for Years.

We have had the best honey harvest here for years. The bees are just booming. It is in fact the best we ever had.

H. C. White.

Madison, Ind., July 17, 1883.

Troubles of a Beginner.

The flood of last winter left me with but 3 colonies of bees. They each swarmed about the middle of June; in 7 days I listened for the piping of the queen, and heard it in one of the hives, but not in the others. A swarm followed, and the piping went on until 4 swarms came off. In one hive, that night, the piping was as loud as ever, but no swarm followed, nor have I heard any piping since. The night after, the fourth swarm came out, but there was no piping or swarming in the others. They put surplus in the upper story (box hives). My difficulty was this, in hiving a swarm that came off on June 16, the cluster was low, on a grape vine. I set a Langstroth hive on the ground and shook the bees down, but they clustered on the hive in front, and refused to enter. I brushed them down, and repeatedly changed the hive, took out some of the frames, but to no purpose; there they staid all night, and got the benefit of a drenching shower. On the morning of the 17th, I sent for a neighbor of greater experience, not liking to lose the bees (a very large swarm). He put in the frames, also put on the boxes, and went to work with smoker and stick, working faithfully in the rain for an hour, and litterally drove them in. I carried them to the stand and had no further trouble. But, on the 9th inst., I took off the boxes and found a very few boxes of nice clover honey, the rest were filled with brood in all stages, young bees, sealed and unsealed brood, and cells with eggs just deposited. Cells that from their color seemed to have been used before, and from which I am convinced young bees had come very lately. After taking the combs out, I watched them for an hour or two, and was rewarded by seeing bee after bee biting off the cap and emerging from their cells. I do not know whether I could have saved any of this brood, by placing the combs under a box hive, or whether I was all wrong in putting on the boxes at the start, and as the bees must have entered the boxes when hived (only 21 days intervening). Have I probably lost the queen, and how am I to know? We are having a famous honey season; white clover covers the land, and bees work prodigiously.

Thos. Martin.

Coal Valley, Ill., July 10, 1883.

[Had you given the swarm sheets of foundation in the brood-chamber, they would not have gone up to the surplus arrangement to build comb, and use it for brood-rearing. If no comb foundation was given the swarm when hived, or old combs, the surplus arrangement should not have been put on. If the queen was "lost," where did the brood come from?—Ed.]

White Honey Harvest Short.

Basswood, which is very abundant in our vicinity, has just gone out of bloom. From some cause, there was not one blossom to many thousands last year, when the weather was favorable but a part of the time, so the yield has been very light from it, this year. White clover has never bloomed so abundantly with us, as it has this season; but the weather has been too cold and wet to give us much from that source, consequently our white honey harvest will be very short. White clover is still in bloom, and we may get a small amount from it yet. We have extracted 2,000 pounds, and have taken 400 pounds of comb honey, and still have in the hives enough to make the former 2,500, and the latter 500 or 600 pounds, from 100 colonies, in splendid condition. Last season we got nearly twice the amount from 50 colonies. We would like to inquire of those having had experience with Alsike clover, if cattle pastured upon it are as liable to become bloated as upon red clover. If the Alsike is free from this objection, it can be largely introduced among the farmers, and will be a great benefit to bee-keepers.

A. J. Hatfield & Son.

New Carlisle, Ind., July 24, 1883.

How I Build Up My Colonies.

My bees are just booming, and have been most of the time since white clover came in, some 4 or 5 weeks ago, and it looks now as if it would last well for 2 or 3 weeks yet. From our present prospects, we will get as good a yield as we did last season. I began the spring with 11 colonies, all in fair condition except one which proved to be queenless; but I kept it going by giving it brood from other colonies, until a new queen was reared, so now it is one of my best. I have bees in 23 hives, but do not count all true colonies until the queen is laying. I make my increase by dividing on the nuclei plan, which I like best, for it leaves the main colonies strong for making new comb, rearing brood, and storing surplus honey. I usually get nice comb built (when I do not have foundation), by putting in 2 or 3 empty frames at a time, near the center of each colony, one frame in a place. By this plan I build up my young colonies gradually, without drawing much on the old ones. Here I will state how I prepare brood sections for the Langstroth hive, so that they hold either natural comb or comb foundation, without sagging or breaking out when handling the combs, either in the extractor or otherwise. I take good broom wire and stretch it tightly across the middle of the section. To do this, I make a hole in the end pieces, put the wire through, fasten one end, and draw it tightly and fasten it, before cutting the wire. Fasten the ends by bending over and twisting around the wire, and I find the bees nearly always build the comb with the wire in the center, with perfect cells on each side. I filled several sections prepared this way last season, with foundation, and it all proved a success without trouble. After fastening at the top, lightly press the wire into the sheet of foundation, and the bees will draw it out alike on both sides. In sections fixed in this way, you will always find that the comb is strong and will stay to its place. I have had them in use several years. From my 11 colonies about two weeks ago, I extracted 200 lbs. of fine white clover honey, and I can take about the same now, and about 100 lbs. of fine comb honey in two-pound sections.

J. W. Sanders.

Le Grand, Iowa, July 20, 1883.

Abundance of Rain.

Rain still reigns in this neighborhood. We have had rain nearly every day this month, until about a week ago, when it ended with the heaviest storm of the season, overflowing the banks of the river, and caused great destruction and loss of life and property in the parts of this city lying low. One bee-keeper in this city had to carry his bees upon the top of his house; another saved only one colony out of his whole yard, being more fortunate than some others who lost every colony. I am happy to say mine are doing very well, and I am satisfied they will pay me a very good interest on my investment. Basswood has started to bloom, and clover is still in blossom; so if we have two or three weeks of dry weather now, we will be all right until fall flowers appear.

W. H. Weston.

London, Ont., July 20, 1883.

Giant Ladies' Slipper as a Honey Plant.

I see that the German word, "Riesen Balsamine" was translated wrong on page 355. It should have been the *Giant Ladies' Slipper.*

L. Knorr, M. D.

Savannah, Ga., July 22, 1883.

[If any of our readers know of this plant yielding honey in America, we should be pleased to hear from them on the subject.—Ed.]

Excessive Swarming.

It has been out of the question to keep bees from swarming. The weather has been too wet and cold, all through the white clover season; with only enough of sunshine to give the bees a chance to swarm; swarm they would, and swarm they did. Pasturage has been good all the spring and summer, so far, but the weather has been so bad that they could not gather the crop, which has been most abundant, if it could have been saved. Basswood opened the 15th, and would have given us a large surplus, had the weather been favorable; bees are very strong, and would do well if they could.

A. W. OSBURN.

Water Valley, N. Y., July 23, 1883.

Sweet Clover, etc.

I enclose samples of honey plants. Please give me the name of plant No. 1, and also state whether it is honey-producing. My bees have not found it yet, as it grows by the kitchen door, and they never come about the house. Is No. 2 the famous Mollie O'Large's honey plant, that we read so much about? Is smartweed and heart's-ease the same plant? Please answer in the BEE JOURNAL.

MRS. J. N. HEATER.

Columbus, Neb., July 2, 1883.

[Number 1 is sweet clover (*Melilotus officinalis*), a well-known honey plant, and for its large and long continued nectar-product, very justly esteemed by apiarists. Another species much like the present one, has white flowers, while these are yellow. Both are natives of Europe, but are now widely disseminated throughout our country, and spontaneously (as would appear) spring up about the yards, roadsides and waste places anywhere. They are biennial plants, flowering or not the first year, according to the earliness, vigor, etc., of the seedling, and the length of the season, but springing up from the root the second year, and making rapid and large growth with an abundance of flowers, each of which is richly filled with honey of excellent quality. The plants are very hardy, and in most places propagate themselves sufficiently to keep up the supply. The first part of the generic name, *Mel*, means honey; so conspicuous, this substance seemed to be to Tournefort, the French botanist, as he examined and named the plant.

Now comes another side to the story. Only last week an appeal came from Livinston County, Ill., for information as to how to exterminate this sweet clover from the roadsides, the officer in charge finding it a veritable nuisance as a weed. Neither is this the first request of the kind that has come to your correspondent from the region of country southwest from Chicago, within a radius of a hundred miles. Cattle do not commonly eat the plant, and no enemies among the insect tribe appear to follow it. The long, hard stems, with open foliage, make a poor substitute for many better plants which are crowded out in the special localities where this clover prominently thrives. This again opens up a very interesting, and in many ways, important question, much too intricate and involved, however, to be entered upon here, except as a simple statement—the question of the peculiar growth of certain plants in certain regions.

We used to have an idea that plants succeeded best in their native country, or at any rate in places most nearly resembling in soil, climate, etc., the original home of the species, but this is by no means the fact. Our worst weeds are such from their vigor and abundant reproductive powers, but nearly all these worst ones are importations from abroad, largely from across the ocean. On the other hand, some American plants, not specially obnoxious at home, are the pests of the fields, gardens, etc., of other countries. Our evening primrose is well-nigh an occupant of the whole land area of the temperate zones, sometimes scattered and scarcely noticeable, sometimes pestiferous as a weed. The same fact may be noted in regard to the plant growth in different parts of our country. In central Illinois Canada thistles do not thrive, no seed at all is produced. Those pests of the eastern pastures and meadows, "hard-hack" and "white weed," are rarely seen in the West, and if introduced, more rarely maintain their unenviable reputation. Any one may multiply these examples, but it is not so easy to answer why such peculiarities exist. Without attempting it here in any way, attention is called to the importance of proper knowledge in this respect, when introducing or harboring plants strange to the vicinity. A pest may be kept out or readily exterminated perhaps at first, which, after a time, becomes a continual nuisance in spite of efforts at eradication. The bee men are blamed in the locality referred to for the existence there of sweet clover, whether justly or not is another matter.

Number 2 belongs to the mustard family, and seems to be a *Dentaria*. The specimen is not sufficiently developed to permit accurate determination.

The plants usually called smartweed and heart's-ease are not the same species, though similar in appearance, and belong to the same botanical genus (*Polygonum*). The former—there are several of them—have a sharp or peppery taste, the latter is quite free from this property, and contains a gland mucilage not found in the other. When, however, bee-keepers speak of the product from "smartweed" the non-acrid species of *Polygonum* are meant, for these are by far the best honey plants.—T. J. BURRILL, Champaign, Ill.

Width of Sections.

In reply to G. H. Denman (see page 363), I would say that my sections were a sixteenth less than two inches wide, and in racks holding 21 sections.

L. C. WHITING.

East Saginaw, Mich., July 20, 1883.

Gibson Co., (Tenn.) Association.

Too much rain this season for a good flow of honey. The crop is almost a failure, in this section. I will get some more yet, but in all that I get from the spring harvest will be about 1,500 pounds of comb honey. My bees are bringing in pollen rapidly now, and rearing bees for the fall crop, and with favorable weather we may expect a good fall crop of honey. Bee-keepers are getting somewhat more interested in bees, in this county, than before; and have organized the "Gibson County Bee-Keepers' Association," a report of which you will get next week. The BEE JOURNAL comes regularly, and is a welcome visitor to Honey Hill apiary.

J. W. HOWELL.

Kenton, Tenn., July 17, 1883.

Poor Honey Prospect in New York.

We had a hard fight to get our bees through the cold spring, and many colonies fell by the way. Since then an almost continual rain blighted our good prospects for a large yield of honey. We had a good show of white clover, but heavy rains prevented the bees from gathering much honey from it. Basswood has helped bees to fill the brood-chambers some, but gave only a little surplus honey. The result is, there is but very little surplus honey in this section, up to this date. We may get some fall honey.

R. BACON.

Verona, N. Y., July 24, 1883.

Basswood Come and Gone.

Basswood began to bloom 10 days ago, and it is now gone. Sumac is in its prime, and will last for 3 weeks yet. I have had about 50 pounds of surplus so far, on an average, per colony, and more is nearly ready to take away.

H. L. JEFFREY.

Washington Depot, Ct., July 23, 1883.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

◆

How to Create a Market for Honey.

We have now published another edition of the pamphlet on "Honey as Food and Medicine," with more *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy **5** cents, postpaid; per dozen, **40** cents; per hundred, **$2.50.** 500 will be sent postpaid for **$10.00**, or 1,000 for **$15.00**. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit. Try it, and you will be surprised.

◆

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

◆

☞ Do not send coins in a letter. It is dangerous and increases the postage unnecessarily. Always send postage stamps, for fractions of a dollar, and, if you can get them—*one-cent* stamps; if not, any denomination of postage stamps will do.

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1 year, for the Weekly, with **$4**, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For **three** subscribers, with **$6**, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For **four** subscribers, with **$8**, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For **five** subscribers, with **$10**, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

◆

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For 50 colonies	(120 pages)	$1 00
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The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

◆

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◆

☞ May we ask you, dear reader, to speak a good word for the BEE JOURNAL to neighbors who keep bees, and send on *at least one new* subscription with your own? Our premium, "Bees and Honey," in cloth, for one *new* subscriber to the Weekly, or two for the Monthly, besides your own subscription to either edition, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

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Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent post-paid for **$1.75.** Address.

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Fulton, Tenn., July 24, 1883.

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Respectfully, J. G. TAYLOR.
Austin, Texas, May 10, 1883.

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G. M. DOOLITTLE.
Borodino, N. Y., Aug. 15, 1882.

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The "Doctor"..	(wide shield)—3½	in. fire tube,	$2.00
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With thanks for letters of encouragement, and the absence of complaining ones, we tender to our thirty-five thousand patrons our best wishes.
Very Respectfully Yours,
BINGHAM & HETHERINGTON.
Abronia, Mich., June 1, 1883.

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A prominent engineer, who is well acquainted with Mines in all parts of Colorado, was recently invited to examine the property of this Company. He gave it as his opinion, and he is perfectly disinterested, that the property is the richest he had ever seen, and is worth $5,000,000.—*Adv.*

Advertisers' Opinion.

The queen business is *rushing*, and we think the BEE JOURNAL deserves much credit as an advertising medium.
E. A. THOMAS & Co.
Coleraine, Mass., July 18, 1883.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

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1883. 1883.

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Send me your address on a postal, and get circular. Six Queens for $5.00.

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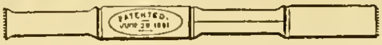
SECTIONS.



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Patented June 28th, 1881.

We can make the "Boss" One-Piece Sections any size or width desired. Send for Price List.

We make the Half-Pound Section any size desired.

JAS. FORNCROOK & CO.
1BCtf Watertown Jeff. Co. Wis., Jan. 1, 1883.

PLYMOUTH ROCKS

Iroquois Strain. Four Yards.

Correspondece cheerfully answered Prices reasonabl
W. H. BUSSEY, 131 Lake Street, Chicago.
2BC1y

HOLY LAND QUEENS

BY RETURN MAIL.

Untested, single Queen, $1.00; 6 for $5.50; or 12 for $10.00. Warranted Queens 25 cents more, each.

I. R. GOOD,

30A2t 8B1t **TULLAHOMA, TENN.**

Cheap! Cheaper!! Cheapest!!!

300 COLONIES OF BEES

for sale, in movable frame hives. Also, Queens, Nuclei, Bees by the pound, Hives, Sections, Smokers, Seeds for Honey Plants, and everything a live bee-keeper needs. Send for circular and price list to **FLANAGAN & ILLINSKI,**
Box 819, Belleville, St. Clair co., Ill.

(Proprietors of Rose Hill, Cahokia, Falling Springs and Lake Apiaries. 1AB1y

---

Golden Italians Again!

One Golden Italian Queen, warranted purely mated, $1.50. One purely mated and tested, $2.50. One pure Queen, not warranted, $1.00.

All the above Queens are of the finest stock in the country. I sold over 300 last season, and had but one complaint. Full colonies ready to divide, for $10.00; safe arrival guaranteed

17Atf **L. J. DIEHL,** BUTLER, IND.

PRIZE QUEENS.

Tested Prize Queen, in a 2-frame nucleus, 9x17, each,	$4 00
Same in nucleus, 4 fra., 8x8,	4 00
Tested Prize Queen, by mail,	3 00
Prize Queen, warranted purely fertilized	2 00
Queen, not standard size....	1 00
Full Colony, 8 frames, Prize Queen........	8 00

Before June 25, add $1 each.
Cash Orders filled in rotation.
Address **E. L. BRIGGS,**
1Aly Wilton Junction, Iowa.

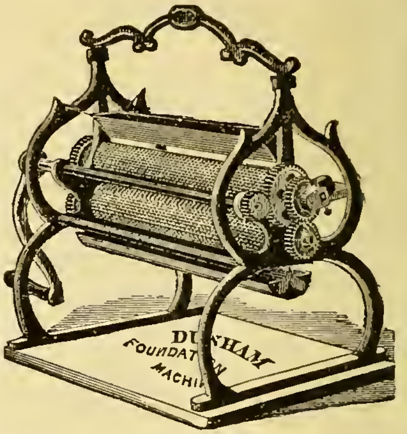
ITALIAN BEES FOR SALE CHEAP.

On account of ill health, I offer for sale 120 colonies of **Italian Bees** in Simplicity hives, and guaranteed strong and in good condition. Price, **$5** each. **JAS. TILLMAN,** ALBION, N. Y.
31A1t

W. Z. HUTCHINSON,

Rogersville, Genesee County, Mich.,

Makes a **Specialty** of rearing fine ITALIAN QUEENS. All Queens bred from imported queens, and from the purest and best home-bred Queens, and the cells built in full colonies. No black bees in the vicinity. Customers can have either light or dark Queens. Orders filled **Promptly.** Single queen $1.00; six queens for $5.00; twelve or more, 75 cents each. Tested queens, $1.50 each. Safe arrival guaranteed. Make Money Orders payable at FLINT, MICH.



FRANCES DUNHAM,

Inventor and Sole Manufacturer of

THE DUNHAM FOUNDATION MACHINE

Patented Aug. 23d, 1881.

Your machines are undoubtedly the very best in existence for heavy foundation.
CHARLES DADANT & SON, Hamilton, Ill.
Nov. 24th, 1882.

And the following from the President of the North American Bee-Keepers' Association:

I am quite positive that your Foundation Mills are ahead of anything yet invented.
D. A. JONES, Beeton, Ont., Canada.
Jan. 29th, 1883.

I send you samples of Foundation which I am manufacturing on one of your machines, in sheets 9x18, which measure 11¼ feet to the pound. I think it superior to any samples of thin foundation I have seen.
J. G. WHITTEN,
Aug. 14th, 1882. Genoa, N. Y.

Send for description and testimonials to

FRANCES DUNHAM,
8ABtf DE PERE, WIS.

BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN.

Editor of the Weekly Bee Journal.

925 West Madison Street, Chicago, Ill.

It contains 160 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey Bee, and at the same time produce the most honey in its best and most attractive condition.

It embraces every subject that will interest the beginner. It describes all the newest discoveries in the art by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive form. It is embellished with beautiful engravings, and is the most perfect work of the kind, for the price, that has ever come under our notice.—Farmer, Lancaster, Pa.

PRICE—Bound in cloth, **75 cents;** in paper covers, **50 cents,** postpaid.

THOMAS G. NEWMAN,
925 W. Madison St., Chicago, Ill.

☞ **A Liberal Discount to Dealers by the Dozen or Hundred.**

OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

VOL. XIX. CHICAGO, ILL., AUGUST 8, 1883. No. 32.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

The Hive and Frame Controversy.

The BEE JOURNAL for July 25, contained an article by Dr. E. B. Southwick, setting forth the advantages of square frame hives, and one from Mr. G.W. Demaree, giving the arguments in favor of rectangular frames.

It was not the intention of the editor of the BEE JOURNAL to take any part in the *argument*, and had he not been singled out for a personal thrust by Dr. Southwick, no word of comment would have been made.

Our remarks on page 365 were soothing and courteous, but even kind words seem to have irritated him.

After giving positive proof of the correctness of Mr. Root's assertion that "more shallow-frame [Langstroth] hives were in use than all others put together," we remarked as follows:

> We do not endorse the opinions of Mr. Root, Dr. Southwick, "or any other man," unless they commend themselves to our judgment! But we hope never to indulge in uncharitable words or feelings against any one for a frank statement or opinion, and, hence, we shall exercise this *generosity* towards Dr. Southwick, when he states that "not ¼ of those that use movable frames, use what is to-day considered the Langstroth frame, and that number is silently growing less!" The Doctor's statement is so far from the facts, as settled by the only statistics available, that we have here an excellent opportunity to let "charity cover a multitude" of errors!

The above was intended to pacify, but it evidently had the opposite effect; at least we should think so, by the following from Dr. Southwick:

MR. EDITOR:—On page 369, of the BEE JOURNAL, I notice an error that puts me in a rather odd position, in the last column near the bottom. It reads thus: "Containing white *clover* comb, made to order by my bees, last fall." Who ever heard of white clover in the fall? The word *clover* should be *drone*, to make sense.

I see in your editorial that you allow one more article from each on the subject; thanks for your generosity, but that was not in my proposal, as I consider these long discussions which appear in the BEE JOURNAL, the greatest bore the readers have to endure. I, therefore, made my proposition so as to avoid anything like a discussion. Mr. Demaree can take the advantage of your generosity if he chooses, but I respectfully decline.

I did not expect that you would attempt to prejudice the reader against me and my article, before they had a chance to read it, by trying to show that what I said I believed (not stated as you have it) was not the fact, and indicate to them that I did not believe what I wrote; that it was for fun, etc. I did hope to get two articles before the readers of the BEE JOURNAL, setting forth the qualities of the two frames without any editorial influence accompanying them, but your criticism on Doolittle's article, and now on mine, convince me that I cannot. Mr. Demaree is fully competent for his side of the question, and the Langstroth frame men certainly will not suffer from my incompetency, and if the two articles could have gone out untrameled, an impartial decision might have been arrived at by some.

As I have done with the frame question, you will, no doubt, allow me a little space to reply to your editorial, and let me first state that I mean every word that I say, and just what I say.

If I understand you correctly, you endorse Mr. Root's statement, by speaking of its correctness being settled, etc., and, as your proof, you bring forward statistics, and state they were gotten from reports of the readers of the BEE JOURNAL. In order to get at the reliability of statistics, we must go to the source from which they were obtained; you say, from the readers of the BEE JOURNAL; now, as the BEE JOURNAL has advocated, and always recommended the use of the Langstroth frame, is it not reasonable to conclude that a much larger number in proportion would be of that faith than where some other, or none at all, were recommended? Again, what portion of the bee-keepers read the BEE JOURNAL? If one in twenty took it, I think the number of your subscribers would be increased; but we will say one in ten read it, and now what portion of its readers made a report? I think if you count your subscribers, and then your reports, you will find that the reports would have to be increased four or five times before it would equal the other, but we will admit that one-half report, and which one-half is that? I think it much more likely that the one-half that has advised with you, and obey you in using the Langstroth frame, would be the first to report; while such as myself and many others would consider the utter impossibility of getting anything reliable from it, would pay no attention to it. Now, as we admit one-tenth of the bee-keepers read the BEE JOURNAL, and one-half of them reported (I think I have been very generous in so doing), we have one-twentieth that reported, and as nearly one-half of them use the box hive, we have a little more than one-fortieth of the bee-keepers to use for statistics, and those are they that you have brought up and educated in the theory that the Langstroth frame is the "*ne plus ultra*" of all frames, and as you find a majority of these use the Langstroth frame, you declare that there is a majority in the whole United States. As well might Brigham Young have declared that there were more Mormons than all other religions put together, just because there were in Utah!

I think I discover a twinkle of fun behind those glasses, and an expression on your face that says: "Ain't I soft-soaping the Doctor good, with my statistics!" Oh my; what statistics!

In the last column you say you will "exercise generosity." Now, Mr. Editor, just hold on; keep your generosity until you can quote my article as it is. If you made that quotation, thinking what you did, it is downright meanness, after what I had written a few lines before. I hope the readers will take the article and not the quotation. You say that "my statement is so far from facts." Now, if I have made a statement that is not a fact, I am a liar, and I do not want it covered up with chairity—that fertilizer of hypocrisy and rascality! That licenser of villainy, and all kinds of meanness! That which covers up a man's sins that he may commit more! No, do not cover up my errors with charity. You hint that they are many—expose them to the world, that others seeing may avoid them, and I, knowing them, may improve by such knowledge. You say my excuse for A. I. Root "is exceedingly thin." Well, it is the thickest I could find, and if that does not excuse him, I do not know what will. But it does not begin to be as *thin* as your statistics!

Now, as I understand you to convey the idea to your readers, it is about thus: "The Doctor's statements are far from the facts; his errors are multitudinous; but he is jolly fellow and we won't mention them; he does not believe half he writes!" Why do you throw out these hints? Do you think you readers are fools, and cannot understand as well as you? Now, I defy you, or any one else, to show that one statement that I have made in that article is not in accordance with facts. What I state to be facts are, with me, known facts; and what I believe are not known facts to me, for if they were known facts, they would be no longer subjects of belief, but of actual knowledge. I explained this in my article, I thought, so plain that "a wayfaring man, though a fool, need not err therein." I do not think I ought to blame you, for it appears to be a second nature for Langstroth men to state what they think, as actual facts; but when you lug me into that association, I assure you that it hurts, for if "jolly" I have some regard for the truth of what I say.

Now, I will give the reasons for believing what I said I believed, and as you think so much of statistics, I will give some in that form. There are, in this vicinity, 36 bee-keepers that I know of; and I think there are none that I do not know, and these all use frame hives; there is not a box-hive among them. Out of this number 3 claim to use the Langstroth hive; one of these has increased the height of his hive so as to use a frame 12 inches deep; another has made his frames to go crosswise of the hive; the other is a man that knows but little about bee-keeping, and gets another man to take care of them, and that man condemns the Langstroth hive every time he has anything to do with it.

Now the statistics: 36 bee men, 3 Langstroth hive men, 33 that use hives taking the square frames, 2 of the Langstroth hive men have changed their frames from the long and shallow to the short and deep frame, so these 2 will have to be reckoned on the side of the square frame, which will make our statistics toot up thus: 35 square frame men, 1 shallow frame man, 36 in all. These statistics, I claim, are much more reliable than yours, for they come from a more enlightened set of men, as shown by their having no old box hives; while almost half of the community from which you get your information are back in the heathen darkness and ignorance of the old box hive and gum.

Again, I read a report a short time ago of a convention, and I think there were about 30 present, and only 2 used the Langstroth frame, but say there were 24 present and 3 used the Langstroth frame, their statistics would show only ⅛ using the Langstroth frame, which is only half of what I had it. Now, do not these statistics "settle it" that the Langstroth frame is a small minority, and that minority is gradually growing less? and the neglect of the square frame neighbor, who cares for the Langstroth frame; many bees would soon drive the last one out to sea.

Another reason is, I think, many of our oldest, most experienced, most scientific, and most successful bee men who use and recommend the square frame, say but little about it; but I have frequently noticed that the greatest noise generally comes from the biggest fools. I might add many more reasons for my belief, but I do not wish to occupy the space, nor have I the time at present.

Mr. Demaree will please accept my thanks for the candor he has exhibited in his article. He has written me that he is satisfied that he "holds the fort." I wrote him there was but little danger that he would not hold it, when he has so strong a corps of editors to guard it; but I advised him to withdraw while his laurels were fresh, lest the people "arise in their might," demolish the fort, destroy him and his guard, and tread his laurels in the mud. Now, hoping that what has been said may not disturb our former friendship, I remain yours truly, E. B. SOUTHWICK.

It is *useless* to attempt a discussion of any subject, when a mild and kindly-worded argument calls out such a *fierce* reply as the foregoing. Such *harsh* words as liar, fools, downright meanness, hypocrsiy, rascality, villiany, etc., are not calculated to induce an impartial decision of any question!

The discussion of the comparative merits of the "square and rectangular frame hives" will, therefore, cease, for the present, in the BEE JOURNAL, with the exception of one article from Mr. Demaree (if he should desire to reply) as promised, two weeks ago, and one from the Rev. L. L. Langstroth, which he is now preparing, by request. Our correspondents will please "take due notice, and govern themselves accordingly."

When it can be discussed impassionately will be time enough to resume—until then, let us take up some other questions, from a review of which some good may result.

☞ The summer meeting of the Cortland, N. Y., Union Bee-Keeper's Association, will be held at Cortland, N. Y., on Tuesday, Aug. 14, 1883.

M. C. BEAN, *Sec.*

☞ Articles for publication must be written on a separate piece of paper from items of business.

The National Convention.

The National Bee-Keepers' Association, will hold its Annual Convention in the City Hall and Council Chamber in the city of Toronto, on Tuesday, Wednesday and Thursday, the 18th, 19th and 20th days of September, during the second week of Canada's Great Fair. All the railroads in Canada will issue tickets during this week, good to return, up to Saturday night 22d, at single fare for the round trip. Special excursion rates will be arranged from various parts of the United States, of which due notice will be given. Those who intend being present may be kept posted on the latest excursion rates, etc., by addresssng me, and also that I may arrange hotel accommodation. Private lodgings will, if possible, be secured for those who desire it, and every effort will be made to make everybody comfortable. A grand meeting is anticipated.

D. A. JONES, *President.*

☞ Mr. E. T. Flanagan informs us that at the St. Louis Fair, the privilege has been granted of selling honey on the grounds, during the exhibition, to all bee-keepers that make a *first-class exhibit* and keep their exhibits intact. This will aid honey consumption very much, and should prevail at all fairs.

Fairs.—To any one exhibiting at Fairs, we will send samples of the BEE JOURNAL and a colored Poster, to aid in getting up a club. The Premiums we offer will pay them for so doing. For a club of 8 subscribers to the Monthly BEE JOURNAL, or 4 we will present Dzierzon's Rational Bee-Keeping, price $2.00.

Postage on Queens to Canada.—On any package of merchandise sent to Canada, of 8 ounces or less, the postage is 10 cents. Queens, therefore, cannot be sent for less than 10 cents each. Canadians ordering queens from the United States, should add 10 cents for each queen, if they are to be sent by mail, for that extra 10 cents will usually eat up all the profits on queen bees, if they are reared as they should be.

☞ The pamphlet, "Honey, as Food and Medicine," is in such demand, that we find it necessary to print them in still larger quantities, and can, therefore, still further reduce the price, as noted on page 399. Let them be scattered like "autumn leaves," and the result, we feel sure, will fully reward honey-producers for both the labor and the small expense.

Local Convention Directory.

1883. *Time and Place of Meeting.*

Aug. 14.—Cortland, N. Y. Union, at Cortland, N. Y
M. C. Bean, Sec.

Aug. 29.—S. W. Iowa, at Red Oak, Iowa.
R. C. Aikin, Sec.

Aug. 29.—Iowa Central, at Winterset Fair Grounds.
Z. G. Cooley, Sec. *Pro tem.*

Aug. 29, 30.—Ky. State, at Louisville, Ky.
Dr. N. P. Allen, Sec., Smith's Grove, Ky.

Sept. 12-14.—Tri-State, at Toledo, Ohio.
Dr. A. B. Mason, Sec., Wagon Works, O.

Sept. 18-20.—North American, at Toronto, Ont.
A. I. Root, Sec., Medina, O.

Oct. 9, 10.—Northern Mich. at Sheridan, Mich.
O. R. Goodno, Sec., Carson City, Mich.

Oct. 17, 18.—Northwestern, at Chicago, Ill.
Thomas G. Newman, Sec.

Oct.—Northern Ohio, at Norwalk, O.
S. F. Newman, Sec.

Dec. 5-6, Michigan State, at Flint.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

From Deep to Shallow Frames.

Mr. J. B. Mason, of Mechanics' Falls, Maine, gives the following reasons, in the *Home Farm*, for changing from the deep to the shallow frame:

My prejudices have for a long time led me to favor a deep frame, and so strong were they that I would not give the standard Langstroth frame a fair trial. This prejudice arose, I suppose, from accepting the theories of the opponents of the Langstroth frame, which theories seemed so plausible that I was led to accept them without proof, and adopt them as being absolutely correct. I suffered a large per cent. of loss with the deeper frames, but this I laid to various causes and any, as it proved, but the right one. At last, after seeing so many accounts from various sources of the success that disinterested bee-keepers met with in using the standard Langstroth, I was led to try it, and as a matter of fact it proved a success with me. Now I claim to be honest in the matter of apiculture, and as I am not interested pecuniarily in the success of the Langstroth or any other frame, consequently I cannot be accused of self-interest in adopting it for myself or advising its use by others. I have in the last two years transferred over 50 colonies from the deep frames to the standard Langstroth, and packed away the old hives which are worthless to me, and as James Heddon said, two years ago, I think I have saved money by so doing, and to show how the tendency is for the Langstroth frame, I will say that out of over 70 orders in the State of Maine for bees, all but 4 were for the Langstroth frame.

Again, I have not as yet attained that profound knowledge of apiculture which would lead me to think that I know it all, and that no one can teach me anything; neither am I ashamed to admit errors, when by study and observation I find my previous opinions, deep-seated though they are, to be incorrect. I had a deep battle with myself before I was willing to admit, to myself even, that the Langstroth frame would and did winter better than deeper ones, but the results in my own apiary, and not only in mine, but in apiaries generally throughout this State, forced me to change my mind, and having so changed, in justice to those who had been taught differently by me, caused me to give my new views to the public. So far from being changeable in matters of bee-culture, I have heretofore clung to my pre-conceived ideas with great tenacity, and have been led to change them only by proof of the most solid character. He who sticks to his opinions does well, but he who changes when he is fully proved in error does better, and I trust to always stand among those who are ready to give up an opinion when proved to be wrong.

Having stated my position and the reason that led me to change my views in regard to the relative merits of deep and shallow frames, I will say, that while all open-top, movable, sectional, hanging frames are Langstroth, and were fully covered by his patent, the term "L." frame, for convenience sake, was given to the particular form, that Mr. Langstroth advised; while those of different form were called after their originators.

* * *

Alley's Shipping Cage Food.—Mr. Henry Alley, of Wenham, Mass., has sent us a black queen and some bees in a cage supplied with his new kind of food. They came in excellent condition, and we returned them to him to see how they stand the journey of 2,000 miles. The food is soft, but does not run, and there is not the slightest chance for its "daubing the mails," and it does not have the disagreeable feature of crumbling and rattling about the cage. The bees ate it with the greatest avidity, and with apparent relish. We hope it will prove to "just the thing" we have long been wanting for use in shipping cages.

* * *

☞ The Fremont, Mich., *Indicator* says: "George Hilton says you can take your dish to his apiary and get pure extracted honey for a shilling a pound. This is almost as cheap as the adulterated syrups of commerce, and a great deal better for the children." That is the way to say it. It gives health; not disease like the vile syrups! and yet costs no more than the adulterated trash!

* * *

☞ The Rev. W. F. Clark, who went to Winnepeg, last summer, is about to return to the States, and possibly may locate in Chicago, as an attache of the agricultural press here.

Honey and Beeswax Market.

Office of American Bee Journal,
Monday, 10 a. m., Aug. 6, 1883.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—The honey harvest in this neighborhood is over, and was very satisfactory every where. Large crops were produced in my immediate neighborhood of bulk extracted and comb honey, and our Kentucky neighbors seem to belong to that favored class of mortals with whom there is no such word as failure. While we had very poor seasons for 5 years in succession, they harvested medium to good crops every time, and this season eclipses all previous ones with them, in quantity. Their quality cannot be excelled. We have had very large arrivals, and, our commission houses being well supplied, the market is overstocked at the present.

There was almost no demand for the last 3 or 4 weeks for our small packages—1 and 2 lb. jars. We sell for table use, and there is a very slow demand for such qualities as are used in barrels for manufacturing purposes. Honey being pushed on the market in such quantities, is sold at all prices, and our friends have the best show in the world for running prices down to a point from which they may be hard to recover.

Our prices, of late, for extracted honey, have been 7@9c. on arrival, and for choice comb honey 14@16c.

BEESWAX—Has been in fair supply, and sold at 30@32c. for good, on arrival. Chas. F. Muth.

NEW YORK.

HONEY—We take pleasure in quoting the following prices on honey, obtainable in our market: Fancy white clover, 1 lb. sections (no glass) 20@21c; fancy white clover, 2 lb. sections (glassed) 18@20c; fair white clover, 1 and 2 lb. sections (glassed) 16@17c.; fancy buckwheat, 1 lb. sections (no glass) 15c.; fancy buckwheat, 2 lb. sections (glassed) 13@14c.; ordinary buckwheat, 1 and 1 lb. sections (glassed) 11@13c.; extracted clover honey in kegs or barrels 9@10c.; extracted buckwheat honey in kegs or barrels 7½@8c.

BEESWAX—Prime yellow beeswax 31@33c.
H. K. & F. B. Thurber & Co.

CHICAGO.

HONEY—New crop of comb honey is being offered, and some sales of it have been made at 16@18c in 1 and 1¾ frames. The receipts of extracted are liberal, and there is a good deal of complaint about unripe honey; consumers holding off. Market, 9@10c for white. Very little dark left, and some inquiry for it.

BEESWAX—30@35c.
R. A. Burnett, 161 South Water St.

SAN FRANCISCO.

HONEY—Gloomy accounts continue to be received from the Southern coast counties regarding the honey crop. In the region of Tulare there is a good yield. Some Tulare comb, crossed and mixed, was placed at 13½c., and extracted of the crop of 1881 sold at 7½c. White to extra white comb 16@20c.; dark to good 10@13½c.; extracted, choice to extra white 7@9c.; dark and candied 6½@—.

BEESWAX—Wholesale, 27@28c.
Stearns & Smith, 423 Front Street.

ST. LOUIS.

HONEY—New, in liberal offering, but little sold in quantities—held higher: extracted or strained at 7½@8½c., and comb at 16c. Lots in fancy packages bring more in a small way, while old and inferior sells less.

BEESWAX—Inactive and easy, at 27@28c.
W. T. Anderson & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—There is a very good demand for new white honey at 18@20c. for 1 lb. sections; 2 lb. new 17@18c.; old, 15@16c. No extracted has been received, and none seems wanted in our market.

BEESWAX—32@35c.
A. C. Kendel, 115 Ontario Street.

BOSTON.

HONEY—We are now just commencing a new season, and the prospect is very bright. We are receiving letters from all over the country reporting an abundant supply. Our principal New England supply comes from J. E. Crane, who writes us that his estimate, made 4 weeks ago, was a safe one, and that instead of from 15,000 to 20,000 lbs., he will have from 25,000 to 30,000 one lb. combs; the finest he ever saw. He will make us his first shipment this week. We had a shipment of 8 cases of one lb. combs from J. A. Green, of Dayton, Ill., the first we have had. About 4,000 lbs. of orange blossom extracted honey from Alderman & Roberts, of Iola, West Florida, and sold at 9c.

We quote our market prices, as follows: White clover, one lb. combs 20@22c; white clover, 2 lb. combs 18@20c.; extracted from 9@10c.

BEESWAX—Our supply is gone; we have none to quote.
Crocker & Blake, 57 Chatham Street.

CORRESPONDENCE

For the American Bee Journal.

The Naughty Hybrid.

JAMES HEDDON.

I will venture to say, had it not been for the sharp and business end of bees, there would have been more failures in our business than we can now boast of, which is no small number. Almost everybody would keep some bees, "just a few for their own use," were it not for their poisonous little javlins. This is an established and well-known law in human nature. This same law applies forcibly to the "naughty hybrid."

Had it not been for the fact that hybrids, crosses between the German and Italian bees, were far more irascible than either of the races from which they sprung, these bees would long ago have been the bee of present apiculture. Now it seems a little peculiar that a tolerably good-natured German bee, and a better-behaved Italian should produce offspring meaner than either race; but such is well known to have been a fact. I have told you several times before, that I had crosses between the brown German and leather-colored Italian, that were as well, or better behaved, and I think I may well say "better" than any other bees I have ever seen.

In this short article I wish to point out the reason for these two different conditions of affairs, and how I exchanged one for the other. I began my crossings as I have said before, from not only the best honey gathering strains of each race, but likewise the best behaved, viz.: the leather-colored Italians, and the larger brown, or gray variety of Germans. I took, and still take the ground, that the German bee is much better-natured than the Italians. The reverse of this has been supposed to be the case by bee-keepers who have used both, and from the quite reasonable reason that they have received more stings from handling German bees.

Now let us see if such results come about because the Germans have the meanest disposition. Bees seldom crawl on the hands to sting. We receive almost entirely all of our stings (except where bees are pinched, in which case all bees sting alike) from bees that take wing while being handled when opening hives, etc. Now one marked difference between Germans and Italians is that German bees fly into the air, and roll and tumble off the combs, falling into the air, and then taking wing very much more than do Italians. Considering the number they put into the air, we do not receive half as many stings from Germans as from Italians, though at the same time we may receive as many or more. Evidences of the innate mean disposition of the Italian bee are numerous. Their obstinancy in heeding the admonitions of the smoker, on being driven from one point to another, when hiving or forcing swarms; their readiness to all tip up their abdomen and stick out their stings when the hive is opened during cool weather and many others.

Now, if this more irascible Italian bee is crossed with Germans, and the offspring inherit the mean, surly disposition of the Italians, at the same time the loose footed, and very ready tendency to take wing of the Germans, their product will be nearly as mean as Cyprians or Syrians are reported to be, and you have the old-fashioned "naughty hybrid." But on the other hand, if in our crossings we carefully foster that valuable propensity of the Italian of crawling about the combs, keeping themselves quiet and evenly distributed over them while being handled, in the point of gentleness you gain whatever your bees inherit of the *really* more amiable disposition of the Germans. Upon this plan I have worked, and in this way I have produced the strain of bees I now possess—one which surprises visitors and students when they see hybrids more gentle than any other bees they are used to handling.

Whenever any of the disposition to fly into the air or tumble off combs crops out among our stock, we make haste to weed it out, replacing it with the best in the apiary. All the above points are simple, and I think well known facts and deductions.

Dowagiac, Mich., July 26, 1883.

For the American Bee Journal.

Hunt Co., Texas, Convention.

Pursuant to a call published by the leading bee-keepers in Hunt County, Texas, a convention was held at Dr. Wm. R. Howard's residence, on the 19th day of July, 1883, for the purpose of effecting a permanent organization.

I. H. Hightower was called to the chair, and D. W. Yeager was chosen secretary *pro tem.*

The object of the convention was explained by the chairman, and a few timely remarks on the importance of thus associating ourselves together were made by several persons.

The convention went into permanent organization with the following named members:

Wm. R. Graham, Rev. C. A. Russell, Greenville; Rev. I. H. Hightower, Rev. D. W. Yeager, L. J. Green, J. E. Spoonemore, Wm. M. Matthews, Jasper McCullough, R. N. Guest, Rev. W. H. Fitz, J. W. Farmer, J. H. Maxwell, Wm. T. Hodges, Dr. Wm. R. Howard, Kingston; Wm. E. Lowry, White Rock; S. E. Smith, Leonard, Fannin County. Lady members: Mrs. W. R. Graham, Greenville; Mrs. S. E. Smith, Mrs. J. H. Manlove, Leonard; Mrs. Wm. R. Howard, Kingston.

The organization then proceeded to the election of officers with the following result:

William R. Graham, President, Greenville; I. H. Hightower, Vice-President, Kingston; William R. Howard, Secretary, Kingston; D. W. Yeager, Treasurer, Kingston.

The constitution and by-laws of the State, with the necessary changes, were adopted.

The organization shall be known as the Hunt County (Texas) Bee-Keepers' Association, and shall hold its meetings semi-annually.

Several important subjects were discussed with interest to all present, and a general good time prevailed.

Dr. Howard exhibited all kinds of improved appliances used in modern bee-keeping, as well as fine Italian bees, which were remarkable for the gentle and quiet manner in which they moved about upon the combs, when handled without smoke or protection.

A general expression of thanks was tendered Mrs. Howard for her kind hospitality in entertaining her guests, and to the Doctor for his efforts to make the meeting pleasant.

The convention adjourned to meet on Thursday, Oct. 25, 1883.

WM. R. HOWARD, *Sec.*

For the American Bee Journal.

The Use of Broad Frames, etc.

W. Z. HUTCHINSON.

Please allow me to thank Mr. W. H. Harmer for his article on page 357. I now see that my article copied from the *Country Gentleman*, might give the impression that I advocated the use of broad frames for holding sections. Such is *not* the case, and, if obliged to use them, I should give up the production of comb honey. It was that very "Heddon section rack," or rather case, that converted me to a comb-honey man. "Eight sections in a broad frame," is an argument often used in favor of frames 17⅝ inches long, and at present it has weight, but it will "grow smaller by degrees and beautifully less." I have used broad frames "just a little," just enough to know what they will do. They will give the bees too much surplus room at once; they will allow the bees to finish the lower tier of sections first, and then "tramp" over them while filling the upper tier; they will bother the bee-keeper when trying to reverse the sections. Why, I can take the whole 28 sections from the Heddon case while somebody else is getting out the first section from a broad frame! Broad frames may hang on quite a while, but they are doomed. Separators ditto. When the Heddon case and sections 1¾ inches wide, filled with foundation, are used, separators are entirely useless.

Just a few words more in regard to the standard Langstroth frame. Webster defines the word standard as "that which is established by authority." If Mr. Langstroth is not authority upon this subject, who is? If he cannot change the standard, who can? We all know that standards can be changed. France changed her standard of weights and measures to the metric system; our school boards often change the standard of the text books, and Mr. Langstroth has changed his standard frame. It has been intimated that "somebody else" changed the size of the frame, and then Mr. Langstroth's sanction was "wrenched" from him. If my memory serves me right, when Mr. A. I. Root began making the Langstroth frame, he sent to Mr. Langstroth for a frame, and this frame was used as a pattern. Not much "wrenching" there. But it is immaterial as to what were the causes that induced Mr. Langstroth to make the change.

But the practical question in regard to this matter is, which is and will be in the majority? Where the 17⅝ frames are already in the majority, and the largest manufactories, and the most of them, the editors of the principal bee papers, and Mr. Langstroth himself, have adopted this size, what else can we expect than that it will remain in the majority.

Rogersville, Mich.

For the American Bee Journal.

The Standard Langstroth Frame.

M. M. BALDRIDGE.

There is not a particle of "proof" in the two column editorial, on page 305 of the Bee Journal, that the "standard" Langstroth frame—the only point at issue—is 17⅝ inches long, outside measure, nor anything of value, when properly interpreted, to show why Mr. Langstroth should prefer a frame ¼ inch longer than the standard.

In the December Bee Journal for 1878, page 427, appears an article from my pen showing that a mistake had been made by some in making the frame 17⅝ instead of 17⅜ inches long, outside measure, and calling it the standard Langstroth. Appended to that article are remarks, credited to Mr. Langstroth, which do not deny the correctness of my position, namely, that the standard Langstroth frame should be 17⅜ inches long, outside measure, but simply that Mr. L., at that date, preferred a frame ¼ inch longer! But what Mr. L. preferred, at that time, was foreign to the point at issue, as was fully explained by me in an article on the same topic, on page 163, April Bee Journal for 1879, to which the reader is referred for details. As Mr. L. has never responded to that article, I have a right to assume that he became satisfied that he did not fully understand my position when he replied, as is claimed, to my previous article.

Now, let me examine the "reasons (?)" credited to Mr. Langstroth, why he prefers a frame ¼ inch longer than the standard: "Considering the accuracy which may be obtained in making the frames stiff and perfectly square, I prefer the Root and Newman measurements."

Now, if any one can explain how the Langstroth frame can be made "stiff and perfectly square" with less trouble, or greater "accuracy," by making it simply ¼ inch longer than the standard, he can do more than I or any one else whom I have talked with on this subject! If it be true that a longer and larger frame can be made stiffer and squarer, and with less difficulty, than a shorter and smaller one, and that, for such "reasons (?)" simply, we should adopt the longer and larger frame for the standard, then why not adopt the size and shape of the Langstroth frame preferred by Mr. Quinby? But this is also foreign to the subject—the text being, What are the correct dimensions of the *standard* Langstroth frame? and not what anybody "prefers," nor what shall we adopt as the standard.

On page 163, April Bee Journal for 1879, the "Ed." appended some remarks to my reply to Mr. Langstroth, from which I now quote: "Many will vary the size of the frame from ¼ inch to 2 inches just to suit a notion, which should never be done. Nothing is more annoying than to have frames vary just enough to be useless for interchanging." I can endorse every word in that citation.

I am satisfied that the frame 17⅝ inches long, now known to some as the "Root and Newman frame," was never made that length "to suit a notion," nor for any valid reasons whatever, nor for the purpose of obtaining any advantages over the standard Langstroth, but simply because it was copied after a blunder in the making of the standard frame, the blunder having first been made by old man Blunderer himself! The pretense that the length was changed from 17⅜ to 17⅝ inches *so as to fit the one-pound section* is sheer nonsense, as Mr. Root made the blundered frame several years before a one-pound box was even thought of—in fact, the blunder was made more than ten years ago!

Mr. Langstroth is credited with saying that "Mr. Baldridge is in error." But in what respect? In regard to the correct length of the standard Langstroth frame? By no means. But simply "in error" that ¼ inch in the length of the frame destroys its "interchangeableness." Now, is that true? As the inside length of the box that holds the 17⅜ inch frames is 18⅛ inches long (see page 331 of Mr. L.'s book), this would leave a space of only ¼ inch between the ends of the 17⅝ inch frames and the box. Now, is that sufficient space for a good practical hive? It may be for some, but it wont do for me. And if the frame, as well as the hive, are each made ¼ inch too long, the projections of the top-piece will also be ¼ inch too long, and these must be cut off before such frames can be used in a box, properly made, to hold the 17⅜ inch frames. So it will be seen that the proper "interchangeableness" of the frames is very disagreeable to say the least.

The 3d revised edition of Mr. Langstroth's book is dated March, 1859, over 24 years ago. But since that date there have been several editions published, and, I presume, one or more have been issued since Mr. L. is credited with what appears on page 427 in December Bee Journal for 1878. In the 3d revised edition, and in every edition of that revised edition that I have examined, full and explicit directions are given for making what has become known as the "standard" Langstroth frame and hive, and I am not aware that any change has been given therein by foot note, or otherwise, in the length of the frames from 17⅜ to 17⅝ inches, nor in the dimensions of the boards that enter into the construction of the box that holds the frames. It is true that the book is "stereotyped," but that is no excuse for not calling attention to the change in the length of the frame and the hive by foot note, or otherwise, if Mr. Langstroth thought such change was really to be desired. Now, when a writer of influence, like Mr. L., "prefers" a change, and especially one of so much importance as a change in the dimensions of a "standard" frame and hive for bee-keepers, he should not only give at least one or more valid reasons, in case he attempts to give any, for making such a change, but he, or his publishers, should likewise give proper notice of such change in his only authorized work on bees, so that the purchasers of the book will not be misled by its teachings. Either this should be done or else the sale of the book should be discouraged by the advocates of the "blundered" frame, which, perhaps, should henceforth be designated as the Root and Newman "progressive" frame!

St. Charles, Ill.

["Mr. Baldridge is in error" in "presuming", that there have been "one or more" revised editions of Mr. Langstroth's book published since the item from him was printed in the Bee Journal for 1878, page 427. No revision has been made since March, 1859. At our request Mr. Langstroth is preparing an article on this subject for the Bee Journal, and one, we hope, that will forever settle this unprofitable controversy.—Ed.]

For the American Bee Journal.

A Few Conundrums on Bees.

A. E. FOSTER.

Why is honey like liberty? Because eternal vigilance is the price thereof.

Why is the bee business like a poor man's purse? Because there is no money in it; or to suit everybody, Why is a well kept apiary like an old cheese? Because there are millions in it.

Why are bees, during the honey season, like clowns? Because they are pleasant and agreeable, doing their managers all the good they can.

Why are bees like merchants? Because they have stores and "cell" honey.

Why are bees seeking among flowers like young fellows going to see their sweethearts? Because they are seeking their honeys.

Why are bees like the English nation? Because they are loyal to their Queen.

Why are bees like old topers? Because they sometimes carry intoxicating beverages to their homes and drink themselves to death. (This thought is produced by the cider mill.)

Why is an occasional colony of bees like some government offices? Because they are filled with drones.

Why are bees like good sailors? Because they always know their latitude and longitude.

Why are bees like rich young swells who visit our watering places? Because they fly around all summer spending an active life, then loaf in winter.

Why do not bees believe in God? Because they obey not his laws; they murder, steal and break the Sabbath.

Covington, Ky.

For the American Bee Journal.

Kindness to Bees.

W. H. SHIRLEY.

Kindness to bees produces kind bees to a great extent. When we had from 6 to 18 colonies, we could call them "little pets," "nice little bees," etc., and take an hour to do a little work with them, where, now, ten minutes must suffice. Then our bees were good-natured enough.

In breeding, especially, we were gentle in handling them at that time. In the fall of 1881, just before the surplus honey was removed from the hives, in our apiary, some one, for sport or mischief, tried one night to take a little honey, but the bees made it too hot for them, and they only succeeded in partly removing the sections, and left the hive so covered up that we did not notice it until the time came for removing the honey from all of the hives. I came to this hive, as to all others, and removed the cover, but I took "leg bail" for shelter. After they quieted down again, I approached more carefully, and succeeded in taking off the honey with but few stings.

Next year, 1882, we reared two queens from that colony, to see if that cross feeling was hereditary. It proved to be, in that case, as I know by the feelings of the past.

Now, our first point in breeding is to handle the breeding colonies carefully, especially when rearing queens, giving our first choice to the "bread and butter" colonies, regardless of color.

I had started out to show where my humble stand-point was, on the strain of bees that suited me, but I have just received the prescription for strained bees from Dr. E. B. Southwick, Mendon, Mich., and as he gives us permission to have it published, I will give place for the Doctor's letter, as he has done it up in much better shape; only adding first, that our fancy strain is about ¾ brown German aud ¼ dark leather-colored Italian, as my experience leads me to think that black bees have ¾ of the "bread and butter" qualities.

2. I select young queens to breed from that are from 1 to 2 years old, as a rule, with exceptions.

3. I do not like old combs to rear bees in, as I have seen combs old enough to dwarf the bees, that were hatched in them. If a good deal of age in combs will make smaller bees, will not a little help do the same thing?

4. Before God gave the honey bee the command to gather honey from flowers, perhaps they lived on manna, buckwheat flour, maize, etc. I guess now almost any bee will gather the honey if God will furnish the shower. I for one will take my chances on it.

Dr. Southwick's letter is as follows:

The Careful Breeding of Bees.

E. B. SOUTHWICK.

Concerning the different strains of bees—the coming bee, the yellow, the leather-colored, the blacks, or this man's peculiar kind, or that man's extra bred, I never have expressed an opinion. There are so many writing on that subject, that there appears to be scarcely room for one who is as contrary as I am in everything; but my ideas and opinions are always free when I have time to give them.

It is my opinion that men, animals and insects (the bee included), are just what they are, through the force of circumstances; that is, a family of man and its decendents can be brought to a high state of intelligence or size and strength, by circumstances, or they may be brought down to idiots or pigmys by circumstances. So it is with everything that has life, either animal or vegetable.

The Italian bee, when brought to this country, had peculiarities that the blacks had not; they were more docile and easier handled, and some other things that they were noted for, and puffed very highly, and sold at high prices, and the breeders and dealers gave them every chance to improve in the very qualities they were noted for, and the purchaser gave them the same extra chance. For instance, all the visitors were taken to see the new bees—the hive slowly approached, the cover carefully removed, the nice little fellows exhibited and carefully shown, with their beautiful yellow rings and their mild disposition. But the blacks are approached in a hurry, the hive jerked open, the smoke puffed in, the frames jerked apart, and everything done in a rough manner, for they are nothing but cross blacks,—not thinking that that is just what makes them cross.

The same can be said of all other bees, that I have said of the Italians and blacks. I do not wish to be understood that the foreign bee has no qualities superior to the blacks. I think they have, and I think the blacks have qualities superior to the Italians. I think that if either kind are taken, and in every respect given the best chance, they will become the best bees. In proof of that I will cite a case: When the Holstein cattle were first imported, a man bought a two-year-old heifer; his neighbor had a common one of the same age; they both came in at the same time. The neighbor thought he would see what he could do with his, so he fed his stock plentifully with the best milk-producing articles he could get, which so increased the power of their milk-secreting organs, that the third generation beat the Holstein in milk and price.

But, of the particular strain, different men have, some one color, some another, and each contending that his or her particular color is the best.

To explain all, I will give you my opinion of Mr. Heddon's strain. He bought some black bees that were large and great honey-gatherers. The question is, how came they such? My opinion is, that their race had, at some previous time, been located in a place where there was a continual flow of honey during the entire summer, and, as they had continual work to do, they acquired the habit of steady industry, and, as they were continually at work, their size, strength and ability to gather honey increased also, until they would outdo all others not under as favorable circumstances. Had they been light-yellow Italians, they would have been just as good and no better. His crossing with the Italians, I should care but little about.

Others having extra strains of bees may have those that have been improved by some peculiar circumstance, and are really better than the common bee.

Bees that have good qualities that are the result of long-continued usage, are worth more, as it takes as long to breed out a good quality, as it does to breed it in, and they will retain these good points as long as circumstances will permit.

You will perceive that in bees I have no respect to color or nationality; my bees are mostly Italians, but I have some blacks, and I would not wish to part with them, for I am a little more certain to find comb honey with them, and I can make a little better exhibit of nice white comb honey from them than the Italians.

Perhaps you would like to know what I think on the condition that will insure an improvement in any kind of bees. Well, I believe that a locality where there is an even and plentiful flow of honey from pussy willows in spring, until frost kills the goldenrod and hearts-ease in the fall, is the best. This, with even weather and light winds, I think, would insure improvement, without any crosses; and did I wish to buy bees and knew of such a locality, and of bees that had been bred in-and-in there, for the last 10 years, I would buy, with my eyes closed to color or pedigree.

You may ask if I think importation has done any good to the business? I will say that I think it has much, and the importers are worthy of much credit for what they have done. Did not the introduction of the Holstein heifer into that neighborhood improve the milking qualities of the cows there?

Mendon, Mich.

For the American Bee Journal.

To Michigan Bee-Keepers.

PROF. A. J. COOK.

We Michigan bee-keepers are unfortunate this year, as the Toronto meeting of the North American Association and our State Fair come at the same time. The American Association offers great inducements. It is the first meeting held in Canada, and everything will be done to make it a grand success. The hope and prospect of having our great and venerable Mr. Langstroth with us will give this occasion a rare prestige. I hear of delegates coming from Florida, Texas, and many from the States nearer by. Who will want to miss it?

Our State Agricultural Society have done everything we have asked to make our State exhibition a glory to us and to the State, so we have extra inducements to remain at home. Some, of course, must do the one, and some the other. Now I wish to appeal most earnestly for all to do the one or the other. I would ask with equal emphasis that our Michigan bee-keepers send to me quite accurate reports of the season's harvest, that I may carry up to Toronto a report that will do Michigan credit. The vice-president in each State should receive full reports from the various apiarists.

Let me then urge all bee-keepers in every State to pay most earnest heed to these two valuable points. See that your own State Fair is grand in its honey exhibit, and that your vice-president goes up to the North American meeting with a hat full of valuable statistics. In both these ways, apiculture will be greatly advanced.

Lansing, Mich., July 28, 1883.

For the American Bee Journal.

Size of Standard Langstroth Frame.

W. P. T.

I have been looking on at the controvesy on this question, and being somewhat interested in it, I have not failed to form my own opinion on the matter. It is true that my first knowledge of bee-keeping was received from the perusal of "The Hive and Honey Bee," which you will, perhaps, say "is something akin to going back to the dark ages of the past."

There appears to be something definite and positive in the assertions and quotations of Messrs. Baldridge and Heddon, whereas there are doubtful and inaccurate statements on the other side; thus "the last edition of Mr. Langstroth's book (the fourth) was published about 25 years ago;" on reference, however, I find that the *third* edition was published in 1863.

In commencing I tried to make my hives from Mr. Langstroth's description, but in 1869, I sent to Messrs. Langstroth & Son for a pattern. This, when received, I found to be somewhat different from the hive described, the back and front were of 1⅜ inch stuff, which admitted of deeper rabbets for frame ends. Thin strips of hard wood were put in for the frames to rest on, and instead of the large triangular top-bar, a small piece was worked out of the top-bar for comb guide. In fact, it might be said to be "the improved Langstroth hive." But with all these changes the dimension of the hive 18⅛, and the outside dimensions of the frame 17⅝ were preserved. With this model I went to work and made hives and frames, and it was not until some years later, when I got a supply of frames from a dealer, which were made up and used without measuring, that I discovered that the bees would almost invariably stick these last named frames fast, and that they were ¼ inch larger than those received directly from Mr. Langstroth. I look upon it that the 4¼x4¼ section had nothing to do with the maker, being of much more recent introduction, and again, the frame as sent out by its inventor, was only 16⅜ inside (vide third edition, page 372).

I have now a lot of the 17⅝ frames on hand, which I will not make up, finding that it does as stated by Mr. Baldridge, "destroy the interchangeableness," and if any one doubts it, let him try to use a 17⅝ inch frame in 18⅛ inch hive, for I do not see that it has been asserted that Mr. Langstroth has sanctioned a change in the size of the hive.

Ontario, Canada, June 25, 1883.

[The only thing worth commenting upon in the above communication, is the mistake made by W. P. T. about the *third* edition of Mr. Langstroth's book being published in 1863. If he will take the trouble to look at page viii. of the "Preface," he will see that Mr. Langstroth's Preface to his *last edition* is dated "March 1859!" The date on the title page is the date when a fresh supply was printed from the *old* plates. It is therefore *not* an "inaccurate statement" to say that "the last edition of Mr. Langstroth's book (the fourth) was published *about* 25 years ago"—the full 25 years being up next March.—ED.]

For the American Bee Journal.

Side Storing Sections a Failure.

J. CRAYCRAFT.

The controversy between Dr. Southwick and Mr. Demaree is very interesting, and each can and will be sustained by the voices of many bee-keepers. I take sides with the shallow frame for this latitude, but not so long as the standard Langstroth; greatly preferring a frame of the same depth, 9⅛x13½, as being far better for the production of comb honey and building up, in the spring; the space being more compact, requiring a less number of bees to keep a given space the proper degree of temperature, at a time when all the working bees are needed in the fields; and for successful and economical queen-rearing, it is far ahead of the standard Langstroth. I think the Doctor's digression, on page 369, fits the experience of many bee-keepers that use the broad section frame. I have tried both to my sorrow and loss, this season, here in the apiary of Dr. Allen. I find it almost impossible to get bees to work above in a 10-frame Langstroth hive, until you have sections drawn out in the broad frame below, on either side of the brood, first removing three frames, and then you will find pollen, and sometime eggs and brood, in them, when you remove them above, and by the time you have had all this work done, and the three frames replaced, and the bees at work, you will have lost the best part of the season (at least here, where clover is our crop). I do not think I could ever make a success in the production of comb honey, in the broad hanging frames for sections. I have removed all of them from my hives, and will pile them up as relics of the dark ages, in bee-keeping.

I hope many of the readers of the BEE JOURNAL will take the advantages offered on page 366, to attend the Kentucky State Bee-Keepers' Convention to be held at the Exposition building in Louisville, Ky., Aug. 29 and 30, and also avail themselves of the opportunity of exhibiting their bees there. This will be a grand opportunity for queen breeders to show their stock. The secretary, Dr. N. P. Allen, Smith's Grove, Ky., extends a cordial invitation to all bee-keepers to come and be with us, and help to make this a grand show of our little industrious friends.

The honey season is about over here, with the exception of some of our finest colonies, that are still building comb and storing honey in sections from the red clover, of which there is an abundance here. I wish our bees were only all "red clover bees;" they are "the coming bee."

Smith's Grove, Ky., July 30, 1883.

For the American Bee Journal.

Changing a Standard.

S. GOODRICH.

The question of a standard frame has been agitated through the columns of the BEE JOURNAL for sometime, and each advocate of a standard frame would, no doubt, be very glad to have the fraternity adopt a standard frame, provided it should be his particular "pet frame," but how many would be willing to make a change. Take the class of men who have several hundred colonies, or even 50 colonies, it would be attended with considerable expense; then if the "standard" should happen to be a larger or longer frame than the one they were using, the real expense would be greater than to the party that is now using a larger or longer frame than what would be decided as a standard. In the former case the lumber in the hives might be a total loss, where, in the latter, much of it could be worked over.

I imagine there are but few of us who would feel that we could stand the expense and trouble of changing, and should a standard be adopted just after a poor honey season, then to have this expense stare us in the face, I doubt whether there are many of us that would be zealous enough in the cause to make any change, but let us look at the other side of the picture. Apiculture is but in its infancy in this country. Every practical apiarist can see at a glance the advantages to be derived from the use of a standard frame, both to themselves and the fraternity in general, to manufactories, supply dealers, and all who want a dollar's worth of fixtures.

I would suggest that this matter be brought up before the convention at Chicago, this fall. Let there be a committee appointed to hear the arguments in favor of each frame, by its friends, and select one as a standard. Let this decision be final. Let every member of the society work for this frame to bring it into general use.

It is natural for every man to think he has the best frame, and has his reasons for thinking thusly. Let such put in an appearance at the convention in Chicago, this fall, and satisfy this committee that he has the best frame, all points taken into consideration, and he will, undoubtedly, have the honor of introducing the "standard frame of America."

I, for one, hope that some of the leading apiarists of the country will take up and push this matter of a "standard frame" to a final settlement, and do it before the country is filled with all sizes and descriptions of frames.

Urbana, Ill.

For the American Bee Journal.

Theory Reviewed by Practice.

G. M. ALVES.

Dr. E. B. Southwick gives us an article on "the best size of frame." At the outset the Doctor tells us that he prefers theory to experience, and in justice to him we must admit that he maintains his preference throughout.

Indeed, it matters not with the Doctor that statistics show that bees winter as well in the Langstroth hive as in others.

It matters not that statistics show that there are more Langstroth hives in use than all other hives combined.

It matters not that the great majority of our hive makers turn out almost exclusively the Langstroth hive.

It matters not that there are scarcely over two or three hive makers in the West who make a square frame hive.

It matters not that the Doctor is told that the queen enters the sections only when she is blocked below, and that experience shows the Langstroth to be as free of this trouble as other hives.

It matters not what statistics are offered. The Doctor's *theory* "hath a stomach for them all." His *theory* shatters the statistics and annihilates the facts in a twinkling.

Many of us have been wont to admire the slow and steady accumulation of the world's knowledge; and to gaze with interest upon facts gotten by toil, as they go to help make up the world's progress. A progress rising slowly but surely upon the indestructible basis of facts—but in the presence of the Doctor, I suppose we should do so no more.

When I first glanced over the Doctor's article, some old lines ran in my head, and as they are quite *apropos* to the Doctor's very peculiar ideas, I know I will be pardoned for quoting them.

Philosopher.—"Dost thou know the thing of theory?"

Herdsman.—"Nay, good sir, I know not the word, but this truly I do know —I saw it with my own eyes."

Philos.—"Out, common fellow! cans't thou persuade the learned by thy vulgar seeing?"

Henderson, Ky., July 25, 1883.

For the American Bee Journal.

Pollen, Breeding in Winter, etc.

A. R. KOHNKE.

When I wrote to Mr. Heddon my observations on this subject, I was under the impression that he still held that bacteria in honey or pollen caused dysentery, which theory I could not bring into harmony with observed facts. Mr. Heddon and myself have discussed this subject personally quite often; in some points we agree, and in others we do not. As Mr. Heddon quotes only part of my letter, I will take the liberty to add the remainder of my conclusion, to which I have come by observed facts, not by already finished experiments, hence can be called a theory only.

For a simile I will draw on the one given by Dr. A. B. Mason, as quoted by Mr. Heddon. A man is hung until he is dead. A bee eats pollen until it is dead. Is there a man alive who will ask no questions after having observed the man's hanging and dying, or the bee's eating and dying? Man wants to know the whys and wherefores which constitute the largest part of the progress in science, as well as everything else. And now for the first question after having seen the dead man or bee. Nobody would ask, why did the man die, or why did the bee die; but why was the man hung, and *why did the bee eat pollen?*

These are pertinent questions, and the ones the answer to which will enhance our knowledge on the subject. An answer to the first question would be, the man committed murder, and with reference to bees, they had nothing else to eat, just where they had clustered.

To be wholly informed with reference to the dead man, we would, perhaps, ask many more questions, such as, why did he commit the murder; he may have done it out of revenge, or to rob, or to hide a crime, by killing the witness, etc. To prevent his hanging, it would not be practicable to confiscate the ropes, nor would it be practicable for an extensive apiarist to confiscate the pollen. That may be done with a few colonies, but when the number runs up to a hundred or more it will be found to be a little too much of a job to examine all the frames and take away those containing pollen, with, perhaps, a large part of the honey. I am convinced that bees will not eat pollen if they have hydro-carbon sweets in the form of honey or sugar candy.

Another reason for this untimely consumption of pollen, is breeding, which is caused by their being housed or covered too warm. A translated article from a German paper seems to point in that direction; if bees have plenty of honey or candy they do not freeze to death so easily as some are inclined to believe they do, and I think, by what I have seen, that this housing and packing business is largely overdone. They do not pack bees in Sweden or Russia; not much, but leave them enough honey to last them from 6 to 8 months. Hence, dysentery is chargeable not to the presence of pollen, but to the absence of proper food, or such other causes as will induce the bees to untimely breeding, of which I have named one, viz.: packing or housing too warm. Still there are other causes having the same effect; for instance, frequent disturbance. Also too much open or poor honey may cause the same disease. In each case the apiarist should strive to avoid the remotest cause, not the direct; that being the safest way to act.

I intended to make some more experiments next winter before touching this subject in a paper, but since Mr. Heddon cited my observations to substantiate his theory, I thought best to give all I think I know about it, and have the bee-keeping fraternity combine in making further experiments and observations.

Youngstown, Ohio, July, 1883.

For the American Bee Journal.

Winter and Summer Frame.

J. E. VAN ETTEN.

I have been very much interested in the discussion carried on in the BEE JOURNAL as to which is the best frame, the shallow or the square frame. The subject has been very ably handled, and the comparative merits and demerits of each very clearly pointed out. Two points, I think, have been established:

1. That the shallow frames are best in summer, because from them the bees more readily enter the sections above.

2. That the square frames are best in winter, because they better enable the bees to cluster in a spherical form and retain their heat.

Granting both these propositions to be sound, then why could not a frame be made to answer both purposes by changing its position? Take, for instance, a Quinby standing frame which is about 9x17. In its usual position it is a shallow frame, and as such well adapted to summer use; placed on its end it would give every advantage of the square frame for winter use, and I find, upon trial, that the same case will cover the frames in these different positions. Will not some of the abler writers for the BEE JOURNAL express their views upon this point?

Kingston, N. Y., July 27, 1883.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Getting Pollen Out of Frames.

Is there any way of getting the pollen out of the combs?

Whitby, Ont. IRA ORVIS.

ANSWER.—So far as I know, no practical method of getting pollen out of combs, has yet been discovered.

Ripening Honey, etc.

Please answer the following through the BEE JOURNAL:

1. Intending to buy several colonies of bees of a neighbor, ½ mile distant, how shall I move them to my place, at this season, without losing any?

2. Can extracted basswood honey, which is a little green, be kept from souring in a barrel, and if so, how?

3. How shall I clip queens' wings? I find it a difficult task to clip them with scissors. W. FISHER.

Hamler, Ohio.

ANSWERS.—1. Twice I have moved my whole apiary about 10 to 15 rods, and once ¾ of a mile. Select a cool, rainy day, when bees are not flying. Close up the hive and give them thorough ventilation above. I give the whole top of the hive a covering with wire cloth or mosquito bar, and, if the bees are any way strong, I place the mosquito bar over a rim, over this open top, several inches in height. Smoke the bees thoroughly—move them to the new stand, and let them set a few hours, and, if the weather is cool, say 10 to 20 hours, until they quiet down, sprinkling them several times with water during that time. Let them out to fly just at sun down. Smoke, and rap upon the hive before you open it. Place a small board up in front of the entrance of each hive, so that each bee must come out cautiously or bump its nose, which will cause it to mark its new location. No other bees should be left in the yard from which you make your removal, and the old yard should be cleared and cleaned up from anything in the line of bee fixtures, and made to look as different as possible. If a few should return, they will cluster somewhere about the old location, and can be easily brought back. If there are colonies left after you take yours away, I would advise you not to move them until winter.

2. I have never extracted honey so thin as to have it sour. Thin honey should be kept in one gallon crocks, having their tops exposed to the air. I am not sure that I know of anything just exactly adapted to your case, but perhaps a little salyclic acid dissolved in the smallest amount of hot water possible to dissolve it, and stirred into the honey, would prevent souring.

3. After stating that I am opposed to clipping queens' wings for any purpose whatever, I will say that the best method I know of is to tangle them up in a small mosquito bar sack, or any sack made of similar material, the meshes of which are just small enough to prevent the queen passing through. As soon as she becomes tangled up her wings will stick through the meshes. Any sharp scissors are the best thing to clip them with.

SELECTIONS FROM OUR LETTER BOX

State Convention for Iowa.

Bees have done well here this season. White clover is now over, and we have a good crop of white honey. I would like to say a few words to the Iowa bee-keepers in regard to calling a State convention on or about the time of the State Fair at Des Moines. The Iowa State Agricultural Society offer $106.50 in premiums to the bee-keepers of Iowa. Now let us have a State convention organized this fall. What say you, Iowa bee-keepers, speak out and let us know what you all think about it through the BEE JOURNAL. D. S. BURBANK.

Grundy Centre, Iowa, July 30, 1883.

Good Honey Crop and Increase.

Since I have adopted the chaff-packing in winter, I have never lost a colony, and I have no trouble with the moth, nor with disease that some speak of. Neither have I had any spring dwindling, to amount to any thing. Last year I had 140 colonies, from which I obtained about 8,000 pounds of nice honey; a large proportion of which I extracted. I sold it all, readily, at 15 cents per pound. This year I have realized from my 140 colonies, about 350 swarms, which I have doubled up to about 160, which now makes about 350 colonies of bees in good condition. My doubling up process, I find, works well, for with two or three swarms to a hive, I could tier up, with section cases, three or four high, and as a result, I have on many of my new colonies from 48 to 96 pounds of beautiful white clover honey; and up to this date I shall receive about 7,000 or 8,000 pounds, of as nice honey as ever went into the market, for which I shall realize, probably, from 10 to 15 cents per pound, and if there comes a fall supply of honey, I shall realize about as much more. But we are in a honey drouth now, and there is no telling how long it will continue.

WM. A. DUSTEN.

Bees in Texas.

My bees are doing well. I extracted last week, and found my bees rich for the time. On examination, to-day, I find that I can take another 1,000 pounds of honey in ten days. The strange part of this story is, that my neighbors, with black bees, get no honey. One man with 30 colonies of black bees, living a mile distant, has no honey, and he did not have a swarm this spring; and for miles around, there has not been a swarm among the native black bees; every one complaining of a bad year for bees. I had 20 colonies in the spring, and had 20 swarms. My bees are all pure Italians, bred for their honey-gathering qualities. I think the above comparison is good evidence in favor of Italian bees, in Texas. I believe that my method of managing bees will, in time, to a certain extent, improve them, as the winters here are so mild, no bees would die from cold, only by starvation; so, in the fall, I dispense with colonies that did not prove valuable during the honey season, by killing the queens and uniting the bees with others and saving the combs for swarms, the next spring. Thanks to you for the article on "Sweet clover for the South," in the BEE JOURNAL last year. Your suggestion caused me to give it a trial. It is not old enough to bloom yet, but I see that it is a success without a doubt. I shall plant several acres of it this fall. DR. J. R. REEVE.

Martinsburgh, Texas, July 24, 1883.

Bee Pasturage.

1. Would it not be an excellent plan to turn a drove of pigs into the clover pasture, letting them subsist wholly on sweet clover until July, after which it can grow for the bees to utilize?

2. Would it be well to mix seven-top turnip seed with buckwheat before sowing for the bees?

F. M. CHENEY.

[1. It would.

2. Yes, for the "turnip seed" would come up in the fall, and in the following spring yield nice bloom for the bees. They get both honey and pollen from it.—ED.]

Honey is of the Best Quality.

This has been the best year for honey I have ever seen, and the honey is of best quality. G. A. DE LONO.

Key West, Fla., July 20, 1883.

Honey Crop in Mississippi.

Since my last report we have had an unusual amount of rain, which has been quite a drawback to the bee-keeper. There was one advantage therefrom, viz.: the white clover continued to bloom, and every day that the bees could work was taken advantage of by them. Now we have the swamp woodbine (cow-itch) in full bloom; also the button or elbow bush (*cephalanthus occidentalis*), and last not least, the Indian corn yields a most delicious honey. All that is needed now is sunshine. I have now taken off over 11,000 pounds.

O. M. BLANTON.

Greenville, Miss.

How to Keep Fire in a Smoker.

I have been plagued for some years with an 1½ inch smoker. I have had a great deal of difficulty in making it burn and hold a fire. I think I have overcome the trouble, the knowledge of which may be of use to others using a small bellows. I made a solution of saltpetre, mixing a heaping tablespoonful of saltpetre with about a pint of water. In this I saturate the rags or wrapping paper, and when dried, I find that they burn entirely up, giving a strong and prolonged smoke. It might be, that by using a stronger solution of saltpetre, porus or half-decayed oakwood could be used to advantage, but I have not tried it yet.

THOS. P. BONFIELD.

Kankakee, Ill., July 30, 1883.

Stock Peas for Honey.

For the benefit of bee-keepers who live in the sourwood country of Tennessee, and where there is a gap between sourwood and other honey yielding blossoms (such as heart's-ease and rough sumac), I will say that stock peas, the whip-poor-will variety, will just fill the gap, if planted on May 15, and they will continue to yield honey for 2 months. The bees worked on peas, last year, from daylight till dark. I saw them working on peas until it was so dark that I had to stoop down very low to see them. It is just 2 months from the time of planting till they blossom.

J. A. P. FANCHER.

Fancher's Mills, Tenn., July 27, 1883.

Industry of Bee-Keepers.

Be up early in the morning; be up late at night; be here; be there; be on the watch. "Eternal vigilance" some one gave as the watch word of bee-keeping, and a truer one never was given.

"No manual labor about bee-keeping," some man remarked the other day, "Well, I would like to have one of those easy laborers start in with me in the morning, and I will guarantee that the pillow will feel good to his head at night, hiving from 10 to 18 swarms per day."

To keep up with a heavy honey flow, with other work, will keep one good able-bodied man on the jump 15 hours out of the 24. And now, what is the outlook for pay for all this work? The question with me is, How cheap can I produce honey to sell, and keep my family. If we only had a strain of bees that could raise potatoes, wheat, corn, sugar, wool, etc., etc., then we would be independent. I think honey will come down to bed-rock prices before long. If it does not, let us bee-keepers, who are in the business now, try and get every person we can to embark in this great non-laboring money-making pursuit. Mr. Bingham once said to me: "A bee-keeper wants to live two lives; one to learn the business, and one to learn to make anything in the way of this world's goods," and I think he had it about right.

W. H. SHIRLEY.

Glenwood, Mich., July 19, 1883.

A "Boss Colony."

I have one colony from which I have extracted 143 pounds of white clover honey, and I expect to get enough more to make it 175 pounds or more, before buckwheat blooms. We have no basswood here, of any account.

G. H. KNICKERBOCKER.

Pine Plains, N. Y., July 25, 1883.

Strained vs. Extracted Honey.

Bee-keepers in this section are very despondent; the honey crop is not more than a third of what it should have been. One of my neighbors, who has 600 colonies in three apiaries, has taken only 12,000 pounds of extracted honey; at the commencement of the season he was confident of taking 140,000 pounds; but as it is almost time to stop extracting, he will not obtain much more. From 185 colonies I have taken 9,600 pounds instead of 30,000 pounds as I expected. Please inform me, by means of the BEE JOURNAL, the difference between strained and extracted honey. Our honey is always classed as strained honey; as it does not sell for as much as extracted, we are inclined to object. I hope we have had the last article on the standard frame; to me it is very dry and uninteresting reading, and as they will never agree, I cannot see much use in arguing the matter any longer.

M. T. HEWES.

New Rhodes, La., July 30, 1883.

[Extracted honey is obtained by the frames being uncapped and placed into a basket or frame holder, which being attached to a single rod is placed into a large can and revolved—the centrifugal force throwing out the honey from the combs, which runs down the sides of the can and is drawn off and placed in jars or some other desirable receptacle. Extracted honey is the *pure liquid*—minus the comb.

"Strained honey" is another thing—the result of hanging up combs, used in the breeding apartment of the hive, and pieces of comb containing bee-bread, dead bees, etc., and catching what passes through the cloth—that is strained honey, and is quite different from the pure virgin honey, extracted as before described, still having the flavor of the bloom from which it came.

The strained honey known to commerce, is the adulterated—that which will not granulate. Consumers help to impose upon themselves by the false idea that pure honey will not granulate. They desire ungranulated honey, and dealers will attempt to supply the demand. Almost all pure honey will granulate when exposed for some time to light and cold. The granulated state is one evidence of purity. Much of the jar honey heretofore sold in the markets, and recommended not to granulate, is a very inferior article, composed largely of glucose.—ED.]

About Drones.

I have reason to believe that many bee-keepers allow the accumulation of too many useless drones, thereby lessening the paying qualities of an apiary. I have been in yards that seemed to be alive with the hum of big, fat, lazy drones, whereas we may as well have had those eggs deposited in worker cells. When I look at a drone, I think it takes a good deal of honey to keep it, and that honey comes out of my pocket. Permit just as little drone comb in the apiary as possible, and use the knife to cut off the heads of drones when capped over. Only a few drones, from choice queens, are necessary, and these are all that it pays to keep. In going through your bees, watch (as a hawk does a chicken) for the signs of the moth worm, and when found follow these signs at the point of the knife, and when the destructive enemy is found, exterminate without mercy.

A. E. FOSTER.

Covington, Ky., July 30, 1883.

Working on Basswood.

It is rainy, cold and wet here still, but between the showers and when it is warm enough, the bees work at a tremendous rate on the basswood, which is now on its "last legs." Some of my colonies have completed 30 two-pound sections from that source, during the past 10 days, while others have 40 combs nearly sealed, for extracting. Basswood beats the world for honey.

G. M. DOOLITTLE.

Borodino, N. Y., July 30, 1883.

The Usual Dearth of Honey Now.

Bees are doing nothing here now, but it is the usual slack between basswood and sumac, and the late flow, which usually begins about Aug. 10 or 15. The prospects look favorable for a good yield of late honey. My bees increased from 18 to 33, and I have taken about 600 pounds of early honey, and about 30 pounds of comb. There are no practical bee men here in my neighborhood; all get comb honey in box hives, and consequently have no surplus yet.

L. G. TRAVIS.

Oregon, Mo., July 30, 1883.

A Beginner's Experience.

In May, 1882, I bought 2 colonies of bees; one Italian and one brown. Last year my Italian colony increased to 5. I wintered them all safely. My brown colony increased to 3 by natural swarming, and they wintered all right. I wintered the 5 in a tight house, built for the purpose, and the 3 were wintered on the summer stands, by placing them in a tight store-box, a little larger than each hive; the front of the box I left partly open, so that they could fly whenever they desired. When spring came they were strong and ready for business, and so were my yellow bees, except one colony that swarmed on Aug. 5. They were very weak, though I had fed them all winter, whenever the weather would admit, but they soon recruited up and gave 2 as good swarms as I ever had. My 5 Italian colonies have now increased to 24, in good condition, and my brown bees have increased from 3 to 11, making 35 in all, from 2 colonies, since a year from last May, when I got about 49 pounds of comb honey; this year I have taken 150 pounds of comb honey. Up to the 1st of this month I did not extract any. as I had no extractor. I had one Italian swarm go to the woods, and 3 others that I hived lost their queens and went back to the old stand and remained.

R. A. Rosser.

Nelsonville, Ohio, July 29, 1883.

Texas Honey Crop a Failure.

The Texas honey crop for this year may be set down now as a failure. The bees may gather enough to keep them in "rations" till the end of the summer, but I doubt whether they will get sufficient to winter on. I have already began to feed to stimulate them to make decent colonies for autumn, and I expect to keep on, more or less, till they get their full winter supply. We can expect no more honey of any importance this year. The leading bee man of this neighborhood has already fed some 600 pounds of old honey to his bees, some 36 colonies, and reports of feeding are heard all around. This is my first year as a bee-keeper, and it is a tough initiation into the mysteries of the craft. But *nil desperandum*, and better luck next time.

R. J. Kendall.

Austin, Texas. July 27, 1883.

Cyprian Bees Ahead.

I have done well this summer. I started in the spring with 29 colonies, in good condition. They were wintered without loss. We now have 56 colonies. This country is "flowing with milk and honey," on account of the immense yield of clover pasture, both for cows and bees. The wet weather is now bringing on the second crop of clover. I still like the Cyprian bees best, and believe they are "the coming bee." My Cyprians are at work before the Italians, and are working on red clover to-day.

D. R. Rosebrough.

Casey, Ill., July 26, 1883.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the Bee Journal.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

How to Create a Market for Honey.

We have now published another edition of the pamphlet on "Honey as Food and Medicine," with more *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy 5 cents, postpaid; per dozen, 40 cents; per hundred, $2.50. 500 will be sent postpaid for $10.00, or 1,000 for $15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit. Try it, and you will be surprised.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

☞ Do not send coins in a letter. It is dangerous and increases the postage unnecessarily. Always send postage stamps, for fractions of a dollar, and, if you can get them—*one-cent* stamps; if not, any denomination of postage stamps will do.

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1 year, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with $6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For four subscribers, with $8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with $10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly Bee Journal for one year.

To get any of the above premiums for the Monthly Bee Journal send double the number of subscribers, and the same amount of money.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies	(120 pages)	$1 00
" 100 colonies	(220 pages)	1 50
" 200 colonies	(420 pages)	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a statement of account every week.

☞ May we ask you, dear reader, to speak a good word for the Bee Journal to neighbors who keep bees, and send on *at least one new* subscription with your own? Our premium, "Bees and Honey," in cloth, for one *new* subscriber to the Weekly, or two for the Monthly, besides your own subscription to either edition, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the Bee Journal to a new subscriber, and progressive apiculture to another devotee.

Bingham Smoker Corner.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent post-paid for **$1.75.** Address,

BINGHAM & HETHERINGTON,
Abronia Mich.

The Very Best.

The Bingham "Conqueror" smoker is the very best thing I have tried in that line. M. M. LINDSAY.
Fulton, Tenn., July 24, 1883.

All Excelling. — Messrs. Bingham & Hetherington, Dear Sirs:—I am now selling your Smokers almost exclusively. You are excelling yourselves in smokers all the time.
Respectfully, J. G. TAYLOR.
Austin, Texas, May 10, 1883.

Cyprians Conquered.

All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's "Conqueror Smoker" did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham.
G. M. DOOLITTLE.
Borodino, N. Y., Aug. 15, 1882.

During the following three months, Bingham Smokers will be sent postpaid, per mail, on receipt of the following prices:

The "Doctor"..	(wide shield)—3½	in. fire tube,	$2.00
The Conqueror	(wide shield)—3	in. fire tube,	1.75
Large............	(wide shield)—2½	in. fire tube,	1.50
Extra............	(wide shield)—2	in. fire tube,	1.25
Plain............	(nar. shield)—2	in. fire tube,	1.00
Little Wonder..	(nar. shield)—1¾	in. fire tube,	.65
Bingham & Hetherington Uncapping Knife..			1.15

With thanks for letters of encouragement, and the absence of complaining ones, we tender to our thirty-five thousand patrons our best wishes.
Very Respectfully Yours,
BINGHAM & HETHERINGTON.
Abronia, Mich., June 1, 1883.

Special Notice.—We will, hereafter, supply the Weekly BEE JOURNAL for one year, and the seventh edition of Prof. Cook's Manual of the Apiary, bound in fine cloth, for $2.75, or the Monthly Bee Journal, and the Manual in cloth for $1.75. As this offer will soon be withdrawn, those who desire it should send for the book *at once.*

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

◆

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

◆

☞ The new two cent rate of postage for letters goes into effect on October 1. Three cent postage stamps will then be but little used. For all fractions of a dollar sent to us hereafter we should prefer either *one-cent,* or else five or ten-cent postage stamps. Do not send coins in any letter.

◆

☞ Do not let your numbers of the BEE JOURNAL for 1883 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

BOND & PEARCH,

(ESTABLISHED 1860.)
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BEES FOR SALE.—100 colonies of Bees in Modest frames (size 11x12½), mostly Hybrids. Also 120 Modest Hives complete. Price, $3.00.
A. E. WOODWARD,
GROOM'S CORNERS, Saratoga Co., N. Y.

PRIZE QUEENS.

Tested Prize Queen, in a 2-frame nucleus, 9x17, each,	$4 00
Same in nucleus, 4 fra., 8x8,	4 00
Tested Prize Queen, by mail,	3 00
Prize Queen, warranted purely fertilized	2 00
Queen, not standard size....	1 00
Full Colony, 8 frames, Prize Queen........	8 00

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OR THE

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THOMAS G. NEWMAN,

Editor of the Weekly Bee Journal.

925 West Madison Street, Chicago, Ill.

Mrs. J. F. Upton gives the following notice of this book in the Bath, Maine, *Sentinel:*

A guide to the management of the apiary for profit and pleasure, by Thomas G. Newman. This work is designed to initiate beginners in bee-keeping in all the secrets of successful bee-culture. Beginning with the different races of bees, the author takes his readers along step by step, carefully explaining the different kinds of bees, illustrating each kind with the eggs and brood, explaining the terms used, the production of wax and comb, and the work done by these wonderful insects. The establishment of an apiary is next considered; the best location, time to commence, how many colonies to begin with, what kind of bees to get, how to care for a first colony, keeping bees on shares, changing the location, all of which it is indispensable for a beginner to know. It is also important to know which kind of hive is the best, how to procure the best comb honey, how to procure it for market, how it should be marketed, what to do with candied comb honey, and how to extract honey. The scientific management of an apiary is then entered into, and illustrations of all the necessary appliances introduced. There is a chapter devoted to the honey extractor and its use, and another to comb foundation and its use. The various honey-producing plants and trees are named and illustrated. Various methods for exhibiting bees and honey at county and state fairs are described. The best and safest plans for wintering bees are discussed, the book closing with some general advice to beginners. The author says of his book on Bees and Honey, "it was not designed to supersede or supplant any of the valuable works on apiculture already published, but to supply a want for a cheap work for the beginners." We most cordially recommend this work not only to beginners, who will find it invaluable, but to all who are not already familiar with the lives and movements of these industrious and intelligent little workers. The information to be gained as to their habits, manner of breeding, intelligence, energy and wonderful instincts, by reading this book alone, is enough to make one regard the bee with admiration and amazement.

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OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

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THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

A Few Seasonable Hints.

The usual dearth of honey in August set in a few days earlier than usual, and caused a stoppage of the honey flow in many localities—strong colonies have been gathering barely enough to supply the daily wants—and others have been living on their stores already collected. Sweet clover, catnip, mustard, etc., have been in bloom, but only yield sparingly of honey as yet—the weather has been too cool to allow the nectar to be abundant in them. In some cases, through carelessness in opening hives, robbing has been induced. In other localities but little cessation has been observed in the honey flow. Mr. Dougherty thus describes the matter in the Indiana *Farmer:*

> It is encouraging to know that we have escaped the drouth which usually occurs during the latter part of July and first of August, while, of course, the bees ceased to gather a surplus, they have secured sufficient to keep them breeding right along. This enables the weak colonies to grow in fine condition, and putting the small after-swarms in fair condition to take advantage of the fall flow of honey, which, in most localities, promises to be exceptionally good, while in others insures a good supply of winter stores.
>
> Weak colonies or nuclei can be built up very fast now. If you have empty comb or foundation to give them, they will build up rapidly on a moderate yield. Good colonies can spare a frame of brood and honey every few days, which, if given to nuclei, will build them up very fast. And just now is the time to begin to prepare for winter. See that all colonies have good laying queens, and that the queen has room to lay. If you have more colonies than you want double up the weak ones, making one good one, selecting, of course, the fullest and best frames, for the one hive.

The honey market is developing—and there is some call for honey, but it is too early yet for a very extended sale. We hope that bee men will see to it that the local markets are well worked up, and then there will be no fear of overstocking the large markets, and thus running the prices down.

A bee-keeper, who called at our office last week, reported having worked up a nice trade in a city near by, and he confidently expected to sell not only his own crop in that way, but also the crops of all his neighboring bee-keepers. The pamphlets on "Honey as Food," that he had distributed to those he interviewed, had made much inquiry and consequent sale of honey. That is the way to do it—work up the local trade, and see that the surrounding towns are fully supplied.

☞ Mr. W. Chitty, organist at Pewsy, Wiltshire, England, has sent us a copy of his newly-arranged music for the "Te Deum Landamus." It is partly founded on an air from Mendelssohn, and chiefly composed by Mr. Chitty, who will send it by mail for 12 cents, to any address. It is an excellent piece of music.

☞ The new two-cent postage stamp is to be of a metallic red color, with a vignette of Washington. It will supersede the present three-cent stamp on the 1st of October.

☞ The pamphlet "Honey, as Food and Medicine" is an excellent thing to give away at Fairs, where a good exhibit is made. A thousand copies will sell almost a fabulous quantity of honey, if judiciously given—say *given to every one who buys a package of honey.* Try it.

☞ Articles for publication must be written on a separate piece of paper from items of business.

Trial Trip—25 Cents.

As the season for Fairs has arrived, and wishing to be able to reach several thousands of the old-fashioned bee-men, and by the aid of the BEE JOURNAL to lift them up to higher ground, adopting newer methods and progressive ideas, we make the following very liberal offer: We will send the Weekly BEE JOURNAL *three months on trial, for 25 cents.* In order to pay for getting up Clubs, we will give a copy of Fisher's Grain Tables, or Scribner's Lumber and Log Book, to any one who will send us five trial subscriptions (with $1.25); for a club of *ten* we will give a cloth copy of Bees and Honey; for a club of 15, a cloth copy of the 7th edition of Cook's Manual of the Apiary; for a club of 25, we will present both the Manual and Bees and Honey. If any one wants these Books for nothing, here is on excellent opportunity to get them for a little exertion.

☞ It is unwise to rush the honey into the market as soon as it is gathered, for it will cause a temporary *glut* in the market, and run the prices down. As soon as the fruit season is over, it will sell more readily.

☞ Speaking of the usual August dearth in honey, an exchange remarks as follows:

> There is, during August, a notable scarcity of honey flowers. This dearth commences sometimes in July. When this absence of bloom occurs, the bees are idle, and with this comes a consequent indolence of the queen.
>
> It is desirable to provide artificial pasturage. By proper planting, we may have nectar-secreting bloom all the season, and there will be no need of supplemental feeding. The Syrian bees seem to breed on all the same, whether there are flowers or not. It is probable that in the desert regions of Syria, natural selection has produced this race, well fortified against those famous famines which, of old, sent the patriarch to Egypt for bread and corn.

Local Convention Directory.

1883. *Time and Place of Meeting.*

Aug. 14.—Cortland, N. Y. Union, at Cortland, N. Y
M. C. Bean, Sec.

Aug. 29.—S. W. Iowa, at Red Oak, Iowa.
R. C. Alkin, Sec.

Aug. 29.—Iowa Central, at Winterset Fair Grounds.
Z. G. Cooley, Sec. *Pro tem.*

Aug. 29, 30.—Ky. State, at Louisville, Ky.
Dr. N. P. Allen, Sec., Smith's Grove, Ky.

Sept. 4.—N. W. Iowa & S. W. Wis., at Ridot, Ill.
Jonathan Stewart, Sec.

Sept. 12-14.—Tri-State, at Toledo, Ohio.
Dr. A. B. Mason, Sec., Wagon Works, O.

Sept. 18-20.—North American, at Toronto, Ont.
A. I. Root, Sec., Medina, O.

Oct. 9, 10.—Northern Mich. at Sheridan, Mich.
O. R. Goodno, Sec., Carson City, Mich.

Oct. 17, 18.—Northwestern, at Chicago, Ill.
Thomas G. Newman, Sec.

Oct.—Northern Ohio, at Norwalk, O.
S. F. Newman, Sec.

Dec. 5-6, Michigan State, at Flint.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

Posey County, Ind., Honey Show.

The twenty-fifth annual fair of the Posey County Agricultural Society, to be held at New Harmony, Ind., on Tuesday, Wednesday, Thursday and Friday, Sept. 11, 12, 13 and 14, 1883. The premiums for bees and honey are as follows:

Stand of Italian bees	$2 00	$1 00
Stand of native bees	1 00	50
Imported or Italian bred queen	1 00	50
20 pounds of honey, in comb	2 00	1 00
20 pounds honey, extracted	2 00	1 00
5 pounds beeswax	1 00	50
Bee hive	1 00	50
Display of apiary implements	3 00	1 50
Foundation for brood-chamber	1 00	50
Display of comb and extracted honey	2 00	1 00
5 pounds honey in comb	1 00	50
5 pounds of honey, strained	1 00	50

Each exhibitor to arrange and take care of his own exhibit.

We understand that Mr. J. M. Hyne, of Stewartsville, Ind., will make an exhibit, and we hope others will do so, and that the display will be very sweet and enticing.

☞ The new Postal Note will be obtainable in a few days at the Post-offices all over the country. Then any sum from one cent to five dollars can be sent in a letter, by obtaining a Postal Note, costing only 3 cents. After October 1, small sums can be easily sent to this office for 5 cents (3 cents for the Postal Note and 2 cents postage on the letter), and there will be no need of sending postage stamps in letters, which often get all stuck together by the damp weather, or being handled while perspiring.

Mailing Queens to Canada.

It has been the practice, for sometime, for breeders to send queens by mail to Canada, and usually they are never heard from after, on account of their being unmailable. A breeder suggested, a few weeks ago, that the rate of 10 cents on samples of merchandise should be paid on queens, and to satisfy him we made a statement in the Bee Journal to that effect. Now, we have an official letter from Joseph H. Blackfan, Esq., superintendent of foreign mails, on the matter. It was written in reply to a question from Mr. J. Rutherford, of Buffalo, N. Y., relative to sending queens by mail to Canada. Mr. Rutherford placed the letter on our desk, for the information of breeders generally. It is as follows:

Washington, D. C., July 17, 1883.—*Sir:* In reply to your letter of the 14th inst., relative to the refusal of the postmaster of Buffalo, N. Y., to receive, for mailing, a package containing queen bees addressed to Canada. I have to inform you that the transmission of articles of merchandise by mail between the United States and Canada is limited, by the postal arrangement in force between the two countries, to *bona fide trade patterns or samples* (specimens) not exceeding 8 ounces in weight; and that articles of merchandise, such as queen bees, sent for sale, in execution of an order, or as gifts, are not *bona fide* samples, and are not transmissible by mail from one country to the other.

If queen bees have been forwarded by mail between this country and Canada, except as *bona fide* trade samples, they have been so forwarded either through inadvertence, or in disregard and violation of the postal arrangement referred to.

I am, very respectfully, your obedient servant,
Joseph H. Blackfan.
Supt. of Foreign Mails.

Fairs.—To any one exhibiting at Fairs, we will send samples of the Bee Journal and a colored Poster, to aid in getting up a club. The Premiums we offer will pay them for so doing. For a club of 8 subscribers to the Monthly Bee Journal, or 4 Weekly, we will present Dzierzon's Rational Bee-Keeping, price $2.00.

Honey Wanted ! !—That sounds well. Two weeks ago an advertiser wanted some tons of extracted honey. This week an advertisement may be seen on page 412, calling for tons of comb honey. It can easily be obtained, and the honey this season is magnificent. That is universally conceded.

Dividing Colonies.

The Indiana *Farmer* remarks as follows on judiciously dividing colonies, and the effect of such dividing on honey gathering:

Artificial swarming or dividing is much preferable to that of natural swarming, when rightly understood; but by those who will not stop to think or learn the laws of instinct by which the bees are governed it cannot be successful. Only yesterday we were called upon to hear the grievances of a brother bee-keeper, who had lost almost the entire honey crop of this season, by his manner of dividing. The first principle, the key to success, is in keeping the old bees and the old queen in the new hive. That is where the work is to be done, and where the working bees and queen should be put. In making divisions not more than one frame of brood should be taken from the old hive; then move the old hive to the new location, leaving the new hive on the old stand, thus throwing all the working bees in the new hive where the work is to be done. The few bees left, and those hatching, will be able to do all the work necessary in the old hive until the advent of the new queen. Our friend mentioned above took exactly the opposite plan, and the old hives with all old bees commenced throwing off swarms as fast as the young queens hatched.

Nebraska Bee and Honey Show.

I desire to call the attention of the members of the Nebraska State Bee-Keepers' Association, and all others engaged in apiculture, to the liberal premiums offered by the Nebraska State Agricultural Society in Class VII., entitled "Bees, honey and apiarian goods," and especially the premium of $25 offered for the best colony of bees. The test of colonies will be net gain, and will be weighed and sealed Aug. 28, and weighed again Sept. 11. Each colony must be the progeny of the queen and colony on trial. All shipments in this department can be made to the Hon. B. E. B. Kennedy, superintendent of Class VII.; and the bees should be on the ground on or before Aug. 27. All other articles may be entered, up to noon of Sept. 10.

M. L. Trester,
Sec. N. B. K. Association.
Greenwood, Neb.

☞ The pamphlet, "Honey, as Food and Medicine," is in such demand, that we find it necessary to print them in still larger quantities, and can, therefore, still further reduce the price, as noted on page 411. Let them be scattered like "autumn leaves," and the result, we feel sure, will fully reward honey-producers for both the labor and the small expense.

Bees and Honey at Louisville.

Under this heading Mrs. L. Harrison, of Peoria, Ill., makes the following pertinent remarks:

It is comforting to know that in some parts of this country at least, if not in Illinois, the production of honey is worthy of a place among other industries. During 1881 and 1882, acing as vice-president of the North American Bee-Keepers' Society for this State, we interviewed the Board, requesting a building, or a separate apartment, for the honey exhibit, also that special premiums be allowed. The prominent bee-keepers of this State, with one exception, responded liberally to the application for special premiums, as did also the editor of the AMERICAN BEE JOURNAL, and those of other States. The request was denied, but a mollifying ointment given instead, by more than doubling the premiums ever before offered for this exhibit. As the present incumbent is a man endowed with a vote, greater things were expected; but in looking over the catalogue for the coming fair, it is apparent that the old ground is maintained, but no more territory is acquired. The great Southern Exposition at Louisville, Ky., (as we see by the Louisville *Courier Journal* of July 8), appreciates the importance of honey production. It says: "While ever day during the Exposition, from Aug. 1, until the closing, will be full of the most interesting features, certain days have been set apart for special attractions, which will be of direct interest to a large number of people. The programme, on the opening day, will be very elaborate. Business throughout the city will be suspended, and the Exposition will be opened by the President of the United States. On Tuesday, Aug. 28, begins a week known as 'Bee-Keepers' and Horticulturists' week.' Prizes will be awarded, and arrangements have been made by the Kentucky Bee Association to have many hives of many kinds of bees within the grounds." Horticulture and apiculture are Columbia's twins, united by inseparable ties, the severance of which would result in the death of both. Then let the devotees of each worship at the same shrine, regardless on the one hand of the grub in the core, as well as the sting in the narrative of the other.

We were rather astonished when Mr. J. Rutherford, of Buffalo, N. Y., called on us last week, and said he had started for the Louisville Exposition to make an exhibit of honey, but owing to having received the following letter, he had concluded not to go. The letter was in reply to an application for space, and is from the general manager, and reads as follows:

J. RUTHERFORD, ESQ.—*Dear Sir:* We cannot accept your exhibit unless you pay $25 and 15 per cent. of the gross proceeds. J. M. WRIGHT.
Gen. Manager.

The Basswood or Linden.

The following parody, says the B. K. *Magazine*, was read at a national convention at Cleveland, Ohio. about ten years ago. The wonderful yields of honey from basswood (linden) taken for three successive years by J. W. Hosmer, Esq., of Janesville, Minn., has made his fame as a bee-master proverbial, and the recital of the facts by Mr. Hosmer himself, so worked upon the poetic feelings of Mr. Whitford, that he at once transformed a sublime poem, recounting the results of the conflict of mighty armies at war into that of a more numerous host busily engaged in pursuing the arts of peace:

On Linden when the sun was low
(All ready were the combs of snow)
The bees began a feat to show,
  Of honey gathering rapidly.

'Twas noon—and yet the July sun
Was half *bee*-clouded by the run,
That streamed to show what can be done
  From Mr. Hosmer's apiary.

With tiny trumpets fast arrayed,
Each stinger sheathed her battle-blade,
Nor laggard natives long delayed,
  But joined the merry revelry.

Then shook old heads with wonder riven,
As past the bees their teams were driven,
For swiftly through the light of heaven,
  Fair flashed the bright Ligurians.

And wider yet their fame shall grow,
On Linden's sweets in combs of snow,
And greater yet shall be the show
  Of honey gathered rapidly.

Well, Hosmer saw a splendid sight,
As forth he went to weigh that night,
Commanding John, his man, to light
  The darkness of his apiary.

The gain that day, per single hive
Was two pounds less than fifty-five;
No wonder, then, bee-keepers thrive
  Who understand their *bees*iness.

The interest deepens. On, ye brave,
Whose work and glory 'tis to save
Our friends, the bees, from cruel grave
  Beneath a sulphurous canopy.

Ah! few shall fail, and many meet
Success like this authentic feat,
When every flower beneath our feet
  Shall feed some dainty epicure.

The National Convention.

The National Bee-Keepers' Association, will hold its Annual Convention in the City Hall and Council Chamber in the city of Toronto, on Tuesday, Wednesday and Thursday, the 18th, 19th and 20th days of September, during the second week of Canada's Great Fair. All the railroads in Canada will issue tickets during this week, good to return, up to Saturday night 22d, at single fare for the round trip. Special excursion rates will be arranged from various parts of the United States, of which due notice will be given. Those who intend being present may be kept posted on the latest excursion rates, etc., by addresssng me, and also that I may arrange hotel accommodation. Private lodgings will, if possible, be secured for those who desire it, and every effort will be made to make everybody comfortable. A grand meeting is anticipated.

D. A. JONES, *President.*

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., Aug. 13, 1883.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—The honey harvest in this neighborhood is over, and was very satisfactory every where. Large crops were produced in my immediate neighborhood of bulk extracted and comb honey, and our Kentucky neighbors seem to belong to that favored class of mortals with whom there is no such word as failure. While we had very poor seasons for 5 years in succession, they harvested medium to good crops every time, and this season eclipses all previous ones with them, in quantity. Their quality cannot be excelled. We have had very large arrivals, and, our commission houses being well supplied, the market is overstocked at the present.

There was almost no demand for the last 3 or 4 weeks for our small packages—1 and 2 lb. jars. We sell for table use, and there is a very slow demand for such qualities as are used in barrels for manufacturing purposes. Honey being pushed on the market in such quantities, is sold at all prices, and our friends have the best show in the world for running prices down to a point from which they may be hard to recover.

Our prices, of late, for extracted honey, have been 7@9c. on arrival, and for choice comb honey 14@16c.

BEESWAX—Has been in fair supply, and sold at 30@32c. for good, on arrival. CHAS. F. MUTH.

NEW YORK.

HONEY—We take pleasure in quoting the following prices on honey, obtainable in our market: Fancy white clover, 1 lb. sections (no glass) 20@21c; fancy white clover, 2 lb. sections (glassed) 18@20c; fair white clover, 1 and 2 lb. sections (glassed) 16@17c.; fancy buckwheat, 1 lb. sections (no glass) 15c.; fancy buckwheat, 2 lb. sections (glassed) 13@14c.; ordinary buckwheat, 1 and 1 lb. sections (glassed) 11@13c.; extracted clover honey in kegs or barrels 9@10c.; extracted buckwheat honey in kegs or barrels 7½@8c.

BEESWAX—Prime yellow beeswax 31@33c.
H. K. & F. B. THURBER & CO.

CHICAGO.

HONEY—There has been a marked increase in sales this week of comb honey. New crop, prime 1 lb. frames (pure white) have sold at 20c. when in fancy cases, in a small way; good many sales at 18c. for some grade 1½ to 2 lb. frames (or prize package) when well-filled and white, 16@17c.; not quite so well filled, 15c.

Extracted is still slow, but late receipts have been riper, and there is more inquiry; 9@10c. for choice clover; dark and buckwheat, 7@8c.

BEESWAX—30@35c. for prime to pure yellow.
R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—Gloomy accounts continue to be received from the Southern coast counties regarding the honey crop. In the region of Tulare there is a good yield. Some Tulare comb, crossed and mixed, was placed at 13½c., and extracted of the crop of 1881 sold at 7½c. White to extra white comb 16@20c.; dark to good 10@13½c.; extracted, choice to extra white 7@9c.; dark and candied 6½@—.

BEESWAX—Wholesale, 27@28c.
STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—New, in liberal offering, but little sold in quantities—held higher: extracted or strained at 7½@8½c., and comb at 16c. Lots in fancy packages bring more in a small way, while old and inferior sells less.

BEESWAX—Inactive and easy, at 27@28c.
W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY—New honey continues in good demand at 18@19c. for choice 1 lb. sections, and such are readily placed as fast as received; 2 lbs. not so active, at 16@18c. Second quality sells 14@17c. Extracted not in demand.

BEESWAX—None in Market.
A. C. KENDEL, 115 Ontario Street.

BOSTON.

We quote our market prices, as follows: White clover, one lb. combs 20@22c; white clover, 2 lb. combs 18@20c.; extracted from 9@10c.

BEESWAX—Our supply is gone; we have none to quote.
CROCKER & BLAKE, 57 Chatham Street.

CORRESPONDENCE.

For the American Bee Journal.

Miscellaneous Experiments.

FRANK R. ROE.

1. Some are in doubt as to whether a swarm of bees will issue from a hive and go off without settling; but they undoubtedly will, sometimes, and that, too, oftener than some estimate, as it has been placed at not more than one in every hundred. For several years past, we have had a swarm or two (out of no more than 25 or 30) to "try it," and they succeeded pretty well this season, as we had a large swarm to come out, and I saw them issue; I watched for the queen, but did not get her, and they started off immediately. I succeeded in cutting off about one-third of them by throwing part of a "potato patch" at them, but the rest seemed determined to go, and I was just as determined to see where they were going; so I followed after them two miles, over fences, through flax, oats, barley, corn, woods, logs and brush, and had to ford a river besides, and then did not get them, but I found out that they did not intend to just go a little ways, and then settle before going to their new home. The entrance to the hive they came from is ⅜ of an inch wide by 8 inches long. They had a pure Italian laying queen with them. Oh, yes! I must tell how long it took me to go the four miles—two there and two back—it took just three-quarters of an hour. The reason I came back in such a hurry was, I had left a swarm hanging on a limb in the bee-yard, and the bees I had cut off from the swarm that went to the woods, settled with them. I had only been back about a minute when they began to come off the cluster. I grabbed a basket, rushed up the ladder, which had been placed there before; shook what few remaining bees there were in it, then poured them in the hive they came from, and by throwing water at the remainder, while they were low, and clubs after they had got out of the reach of water, we succeeded in settling them again.

MORAL.—When a swarm tries to go off, it does not pay to give up until the last minute.

2. I had a queen to hatch, after which the cap to the cell sprung back, the bees then sealed it up and swarmed. There was no other cell, and no larvæ in the hive.

3. After a queen had hatched from another cell, a worker bee was sealed up in it, and I had another case where a colony was building cells and sealed a worker up in one. Why did not those workers gnaw out, the same as a queen? They were both dead when I found them. If I had not peeped into the last mentioned cell, I would have inserted it in a nuclei, and waited for a queen to hatch.

4. When I am in doubt as to whether a cell is good, or do not know when it will hatch, I open it on the side with a sharp knife and look in, then seal it up again, and if a good job is done, the occupant will never know the difference, but a good job must be done, or the bees will tear the cell down. It can be done by warming a knife blade and running it over the place. I have taken queens out into my hands three or four days before their time to hatch, and then put them back and sealed them up, and they hatched as if they had never been disturbed.

5. I had two swarms issue at once and settle together, and as they settled on the body of a tree, I smoked them into a nail-keg and tied burlap over the top, so that I could bring them down. As dinner was ready, I set them in the shade, and when I came back, you may just guess the temperature was "up" in that nail-keg. The most of them sought refuge in the bottom, without finding it. When I poured them out they were wet all over with honey, and the honey also ran out of the keg in a stream. They had taken it from the hive before swarming, and when they began to get too hot, they disgorged it. There was scarcely any of them dead when I opened the keg, but they nearly all died soon after.

6. The reason why some swarms will sting, and others will not while swarming, is this: If the hive from which they issue is well filled with honey, they will fill themselves before coming out, and a bee, gorged with honey, will not sting from choice; while upon the other hand, if there is scarcely any honey in the hive when they swarm, they will not be filled, and are in perfect trim for stinging.

Jordan, Ind., July 25, 1883.

* * *

Read before the Texas Association.

Comb or Extracted Honey.

W. K. MARSHALL.

The question whether comb or extracted honey will pay best, is one that is attracting the attention of bee-keepers. To decide this question we must take all the surrounding circumstances into consideration. It is admitted that comb honey will sell higher than extracted. In a locality convenient to market, where the honey would not have to be transported any distance, or handled often, it might be doubtful which would pay best. It is admitted that bees will gather more extracted honey than comb; with comb foundation, however, the amount would not vary so much. Say that a colony would produce 100 pounds of comb honey, and that it would bring 20 cents per pound, making $20, it would require the same colony to produce 200 pounds at 10 cents to bring the same amount.

The expense in producing the comb honey is greater than that of extracted. The sections and cases in which to pack it, would cost say 2 cents per pound. The difficulty in transporting comb honey any distance to market, is so great that for those at a distance from market it amounts almost to a prohibition. I have never been able to transport comb honey any distance without having it broken and injured, so as materially effect the sale. I believe the only way to market comb honey safely is to go with it, and handle it yourself. Taking into consideration the additional expense of producing comb honey, and the difficulty of getting it to market, I am convinced that our true policy is to work for extracted honey. There may be exceptions to this rule; there may be localities where there is a demand for comb honey, and not much for extracted honey. The demand for extracted honey has been largely on the increase, and there has been more and more demand for it every year. I believe the demand for it will very soon be unlimited. The ease and comparative cheapness of sending it to market, and the fact that a colony will produce decidedly more honey, all combine to point us to extracted honey as our principal production. We can, for the present, find a market for all we will produce near home. Extracted honey, at present prices, will pay. Anything like a good colony ought to produce 100 pounds, which, at present prices, would be $10. This, after deducting all expenses, ought to clear $5. This is a moderate calculation, and I think could be realized with anything like good management.

Marshall, Texas.

* * *

For the American Bee Journal.

Italian and Hybrid Bees, etc.

S. A. SHUCK.

I have found bees in the timber in Ohio, Iowa, Kansas, Missouri and Illinois. Seven years ago last April, I purchased my first colony of bees for the purpose of studying and practicing modern apiculture. They were the so-called brown bees, in box hives. My first young queen mated with a hybrid drone, giving me bees that, one in every 25 or 50 showed the so-called second yellow band. Since then, I have had hybrids of every grade, from black and brown queens to Italian queens. I have owned black, brown and Italian bees, that at certain times in the season I could, without difficulty, handle without smoke, while many of the same bees, at other times, were intolerably vicious when disturbed. I have to-day, in my apiary, Italian bees, or those showing all the necessary markings in color, and that, too, without the window or "stuffing" tests; that with honey coming in, as it is, in abundance, can be called amiable and well behaved, but under destitute circumstances, it is almost out of the question to handle them without protection. I have others, Italians, that in all weather that is fit to handle bees at all, and from the point of starvation to honey in the greatest abundance, can be handled without smoke or protection.

In 1881, I had as fine hybrid bees as could have been found anywhere. They were excellent honey-gatherers and comb builders, produced in the same way that the "celebrated red clover strain," mentioned in the Bee Journal not long since, was produced, by crossing the large Italians with the brown bees; that is, I guess, they came in this way, as they were the Italian queens, producing very large hybrid bees that were gentle and "boss" workers when there was plenty of white clover and basswood. The stripes on them were very dark, and much smaller than "kittens," and they did not have very long hair on their "hind legs," and when the extremely hot and dry weather set in, they "sat" in (their hives); while our Italians that did not appear to do near so well during clover and basswood, went far and near visiting every nook and corner in search of the scanty bloom; maintained their stores and gained a moderate supply for winter. These hybrids consumed their stores in brood-rearing, and for winter supplies had plenty of bees and empty combs. This was not all, shortly after the bloom failed, two of those hybrids swarmed, another two balled and killed their queens, but the Italians "toiled leisurely on."

In 1880, a friend and I purchased a selected imported queen, that I have mentioned before in the Bee Journal. She was one of the most prolific queens I have ever seen, but her bees, which were gentle and excellent workers, spent nearly all their energies in the early part of the season, in brood-rearing. They were the most excessive builders of drone comb I ever saw, and while other queens in my apiary refused to lay drone eggs until their hives were crowded with bees, this queen would occupy every available cell.

For these reasons I discarded the imported stock. Besides the qualities of the imported stock, the bees were small and the drones very dark. I made the discovery in June, 1881, that I was losing ground by breeding from imported stock, and during the remainder of the season I disposed of all the daughters of the imported queen but three. During July and August, 1881, I reared several queens from the best home-bred stock I had, for the express purpose of producing my drones in 1882. In the spring of 1882, drone combs were excluded from the few colonies of hybrids and imported stock, and supplied in abundance to those from which we wanted drones. Our queens of 1882 were all reared from four home-bred queens. About 10 per cent. of our queens mismated. The hybrids were all destroyed last fall. Two queens were superseded late in the fall, and the young queens both mismated, one of which was destroyed this spring, so that, to-day, in 56 colonies, we have but one hybrid queen.

For two reasons I have given the above short history of my efforts in breeding for good bees.

1. To give the reader some knowledge of my experience with bees.
2. That a comparison of my experience with that of those whose experience appears from time to time in the Bee Journal, and who are advocating hybrid bees may be had.

It is not my intention in this communication to discuss the merits or demerits in a definite way of either hybrids of Italians, but I wish to drop a few hints that may tend to encourage apiarists to think solidly for themselves, and not allow others to think too much for them; and to do this in a practical way, I will introduce a question here. If such a happy hybrid cross can be "hit upon" so easily as some of our bee-keeping friends are contending for, why is it that, with Italian bees in this country for more than 25 years, our most prominent beeders have never made the discovery? And, again, if such hybrids are so easily produced, why is it that younger apiarists like myself and hundreds of others who are readers of the Bee Journal, cannot produce the same results, especially when we have the instructions how it is done repeated over and over again to us?

These hybrids have been represented as the "celebrated red-clover strain," and "the coming bee;" yet the reports in honey from those having this "celebrated" stock are no greater than the reports of novices. Italian bees from my apiary, numbering 100 colonies or more, have worked on red clover every season since I purchased them. I have not had time yet this season to visit the fields, but some of my neighbors told me yesterday that the yellow bees were working on the red clover "thickly." Hybrids from our bees, as would be expected, work largely on red clover, and I do not see why hybrids from any other good strain of Italians should not work on it.

One thing about red clover, but few apiarists seem to have realized, and that is its failure to secrete nectar. Our bees have worked on it best when the weather is warm both day and night, and making the most thrifty growth. Cool nights stop the secretion of its nectar, and there are but few plants that fail as quickly in dry hot weather as red clover.

Bryant, Ill., June 18, 1883.

For the American Bee Journal.

The Humidity Question.

S. CORNEIL.

The relation of the humidity of the atmosphere to the mortality of bees in winter, is referred to by the writer of "Bee Notes" in the *American Agriculturist* for January and February last, and quotations therefrom appear on page 68 of the present volume of the Bee Journal. After very fairly summarizing some points in an article of mine on page 728 of the Bee Journal for 1882, he says:

"The writer then asserts that in those winters most remarkable for bee mortality, the air has been very moist. We have the data whereby this can be determined, as in this place the condition of the atmosphere as to moisture has been recorded daily for 19 years. We will compare the figures with the loss of bees, and give it to the readers of the *American Agriculturist* in February. If this be true, it shows well why sub-earth ventilation has been so successful, as by that method the air is kept from getting moist. The appearance of the bees that die of dysentery is also favorable to this view. They look dropsical, and seem fairly oozing with liquid excreta."

In his "Notes" for February, he says: "An examination of the condition of the atmosphere, as to the point of saturation, shows that there is not the least evidence in favor of the idea that excessive moisture was in any single case the cause of the great losses of bees. It also appears that in all the seasons of bad wintering, severe cold was experienced. It is further shown that when the cold occurred early in the winter, the mortality commenced at an early period. If late, the bees did not appear diseased till near the end of the winter."

I find no fault with the criticism, but the records examined must have been very different from those of the Signal Service in connection with the War Department at Washington. The Chief Signal Service Officer of the United States Army has, at the expense of a great deal of trouble and labor, very courteously supplied me with data from which I have compiled the accompanying table, an examination of which will show that at most points the humidity, as well as the cold in the winter of 1880-1, was excessive. The temperature for each month of that winter has been compared with the monthly average at each station since it was established, and so with regard to the relative humidity. In the columns for temperature the figures preceded by the minus sign indicate that the temperature was so many degrees colder than the average. Those having the plus sign signify the reverse. In the columns for humidity, the figures preceded by the plus sign indicate that the moisture was so much in excess of the average, dry air being represented by 0, and the point of saturation by 100. Those having the minus sign show that the air was so much drier than the average.

The way in which cold and moisture affect bees injuriously in winter, I conceive to be somewhat as follows. But first let me say that I think it is fully established that the temperature of a cluster of bees is not constant, like that of mammalia and birds, but varies, through a considerable range, with the temperature of the surrounding air, yet never falling as low, as in some of the lower orders of the cold-blooded animals, without producing death. It is also established that bees do not hybernate perfectly, but are at all times more or less active and consume food, and that this activity and consumption of food are increased by severe cold. Since severe cold reduces the temperature of the bees, the air permeating the cluster will also have a lower temperature, and will, in consequence, have

TABLE—Showing the average Temperature and Relative Humidity during the Winter Months, also the Monthly difference from the average, and the total differcnee for the winter months at the respective Stations during the winter of 1880-81.

NAME OF STATION.	Average Temperature for Four Winter Months since Station was Established.	Average Relative Humidity for Four Winter Months since Station was Established.	DECEMBER, 1880. Difference of Temperature from Average.	DECEMBER, 1880. Difference of Relative Humidity from Average.	JANUARY, 1881. Difference of Temperature from Average.	JANUARY, 1881. Difference of Relative Humidity from Average.	FEBRUARY, 1881. Difference of Temperature from Average.	FEBRUARY, 1881. Difference of Relative Humidity from Average.	MARCH, 1881. Difference of Temperature from Average.	MARCH, 1881. Difference of Relative Humidity from Average.	WINTER OF 1881. Difference of Temperature from the Average for Four Months.	WINTER OF 1881. Difference of Relative Humidity from Average for Four Months.
	Deg.		Deg.		Deg.		Deg.		Deg.		Deg.	
Denver, Col....	32.5	51.7	— 0.5	+ 8.0	— 1.0	+ 7.3	— 3.3	+ 5.7	— 1.8	+10.7	—1.7	+8.0
New London, Ct	31.5	71.8	— 3.6	— 0.2	— 4.6	— 2.9	+ 0.8	+ 0.8	+ 1.7	+ 4.5	—1.8	+0.5
Bismarck, Dak.	14.1	80.7	—10.3	+ 5.4	— 8.6	+ 8.6	— 3.4	+ 6.4	+ 1.5	+ 2.0	—5.2	+5.6
Deadwood, Dak	26.2	63.3	— 4.8	— 4.8	— 7.7	+13.9	— 2.5	+12.2	— 1.3	+ 9.1	—3.8	+7.6
Pembina, Dak.	6.4	91.0	— 3.2	+ 3.1	— 5.8	— 0.7	+ 2.7	+ 1.0	+ 5.2	— 3.3	—0.3	0.0
Yankton, Dak.	22.2	67.3	— 6.2	+ 1.6	—10.1	+ 4.4	— 7.5	+ 8.1	— 7.3	+ 1.5	—7.8	+3.9
Cairo, Ill.......	40.8	72.4	— 5.5	+ 0.7	— 7.1	— 0.5	— 3.3	+ 1.9	— 2.5	— 1.5	—4.6	+0.1
Champaign, Ill.	30.8	69.8	— 7 0	+ 4.8	— 4.8	— 3 1	— 6.7	— 0.7	— 4.2	+ 1.0	—5.7	+0.5
Chicago, Ill....	30.0	73.7	— 5.7	— 3.8	— 6.9	— 6.3	— 4.9	+ 1.2	— 3.3	+ 3.2	—5.2	—1.5
Ind'napolis, Ind	34.4	71.6	— 8.4	— 1.6	— 6.8	— 0.6	— 4.1	+ 4.1	— 3.8	+ 5.4	—5.8	+2.1
DesMoines, Ioa	28.0	71.0	— 4.0	+ 1.2	— 9.9	— 0.3	— 8.0	+ 7.3	— 7.0	+ 6.8	—7.2	+3.7
Dubuque, Iowa	26.5	69.6	— 7.4	+ 4.8	— 8.2	+ 3.7	— 5.9	+ 5.3	— 3.3	+ 4.1	—6.2	+4.5
Keokuk, Iowa.	31.1	72.2	— 4.7	— 2.6	— 7.3	— 2.5	— 6.5	+ 4.6	— 4.5	+ 3.8	—5.7	+0.8
Dodge City, Kas	33.9	59.6	— 6.8	— 0.2	— 7.2	— 1.8	— 8.0	+ 7.5	— 2.5	+ 2.7	—6.1	+2.0
Leaven'wth, Ks	32.9	67.5	— 4.7	— 0.5	— 6.6	+ 0.3	— 8.1	+ 8.3	— 4.0	+ 3.5	—6.0	+2.9
Eastport, Me...	24.2	73.6	— 0.8	— 2.1	— 2.7	— 3.0	+ 1.0	— 1.0	+ 4.3	— 0.1	+0.5	—1.5
Portland, Me ..	28.0	69.9	— 2.1	— 1.5	— 1.3	— 3.2	+ 2.5	+ 1.1	+ 5.1	+ 2.5	+1.0	—0.3
Boston, Mass ..	29.7	70.8	— 4.0	— 2.6	— 4.6	— 5.2	— 0.3	+ 3.0	+ 1.9	+ 5.6	—1.8	+0.2
Spr'field, Mass.	30.0	68.6	— 4.7	— 7.0	— 5.6	— 3.7	— 1.7	— 3.0	+ 1.1	+ 2.9	—2.7	—2.7
Detroit, Mich..	28.4	76.4	— 5.8	— 0.7	— 7.3	+ 0.6	— 0.7	+ 4.0	+ 0.9	+ 3.5	—3.2	+1.8
Escanaba, Mich	19.2	75.8	— 3.6	+ 1.3	— 8.0	+ 4.2	— 4.3	+ 5.1	+ 1.0	+ 5.6	—3.8	+4.1
Gr Haven, Mich	28.3	79.7	— 4.4	+ 1.5	— 6.3	— 1.7	— 3.0	+ 3.0	— 0.9	+ 3.0	—3.6	+1.5
Marquett, Mich	21.2	69.9	— 3.3	+ 2.2	— 7.9	— 1.4	— 5.5	— 3.7	— 0.4	+ 3.6	—4.2	+0.2
Pr. Huron, Mich	26.2	80.7	— 5.2	— 4.8	— 6.8	— 1.7	— 3.2	+ 1.2	— 1.4	+ 4.8	—4.1	—0.1
Duluth, Minn..	18.1	76.5	— 4.3	+ 9.0	— 7.3	+ 2.1	— 2.7	+ 5.0	+ 3.0	+ 2.8	—2.8	+5.7
Mooreh'd, Minn	10.7	82.0	......	......	— 4.2	—13.7	— 5.1	— 7.1	— 0.3	— 8.6	—3.2	—9.8
St. Paul, Minn.	20.6	72.9	— 5.0	— 1.0	— 7.4	— 0.1	— 2.6	+ 2.1	+ 1.4	+ 0.7	—3.4	+0.4
F. Assimb. Mont	20.9	60.5	—13.9	+ 8.5	— 5.6	+ 4.8	— 4.0	+ 8.3	+ 5.4	+ 3.5	—4.5	+6.3
F. Benton, Mont	20.9	68.8	—12.6	+ 7.2	— 3.7	+ 3.1	— 0.2	+ 4.9	+13.3	— 5.6	—0.8	+2.4
Ft. Keogh, Mont	20.9	68.8	— 7.4	+ 7.9	—11.3	+ 7.4	— 1.7	+ 3.9	+ 4.5	+ 1.9	—3.9	+5.3
Helena, N, Mont	24.4	64.5	—13.4	—18.7	— 5.1	+ 9.8	+ 0.7	— 0.6	— 4.2	+ 7.2	—3.4	—0.6
N. Platte, Neb..	27.8	64.3	— 7.0	+ 2.0	— 7.4	+ 4.0	— 6.9	+13.2	— 1.8	+12.0	—5.8	+7.9
Omaha, Neb...	27.7	70.1	— 6.5	+ 3.4	—10.2	+ 3.8	—10.2	+10.7	— 8.2	+11.0	—8.8	+7.2
Albany, N. Y..	27.2	69.9	— 3.1	+ 3.6	— 3.3	— 0.9	+ 2.4	+ 3.7	+ 3.9	+ 2.2	0.0	+1.6
Buffalo, N. Y..	27.7	77.8	— 6.4	+ 0.5	— 6.8	+ 1.0	— 3.7	+ 1.1	— 1.9	+ 4.9	—4.7	+1.9
New York, N. Y	32.9	75.8	— 5.3	+ 0.4	— 4.5	+ 1.8	— 1.9	+ 3.4	— 2.4	+ 3.1	—2.9	+2.1
Oswego, N. Y..	28.8	72.7	— 4.5	+ 4.0	— 5.3	+ 1.3	— 1.8	+ 2.7	+ 0.8	+ 3.8	—2.7	+3.0
Cincinnati, O..	38.2	67.6	— 5.9	— 3.6	— 4.7	— 2.1	— 1.6	+ 2.3	— 2.3	+ 4.5	—3.6	+0.2
Cleveland, O...	30.0	76.6	— 6.8	— 1.7	— 6.8	+ 2.7	— 3.2	+ 5.0	— 2.7	+11.5	—4.9	+5.2
Columbus, O...	34.6	70.2	— 7.0	+ 1.7	— 7.1	+ 1.2	— 5.3	+ 4.2	— 4.0	+ 6.7	—5.8	+3.5
Erie, Pa	31.0	77.0	— 7.1	+ 1.4	— 5.9	+ 5.5	— 3.3	+ 1.8	— 2.2	+ 5.1	—4.6	+3.4
Philadelpha, Pa	34.8	72.5	— 5.7	+ 0.6	— 4.8	— 0.1	— 3.2	+ 4.1	— 1.2	+ 4.3	—3.8	+2.2
Pittsburg, Pa..	33.8	72.6	— 5.9	+ 2.6	— 3.1	+ 4.1	— 2.8	+ 0.8	— 1.8	+ 3.3	—3.4	+2.7
Newport, R. I..	33.3	74.9	— 4.4	+ 2.5	— 4.6	— 0.5	— 2.5	+ 3.0	+ 0.5	+ 4.1	—2.7	+2.3
Burlington, Vt.	24.6	72.1	— 4.8	+ 1.8	— 5.9	— 2.1	— 0.1	+ 1.3	+ 2.1	+ 1.8	—2.2	+0.7.
La Crosse, Wis.	24.1	70.6	— 6.7	+ 3.7	— 8.4	+ 4.6	— 5.0	+ 4.0	— 1.9	+ 7.2	—5.5	+4.9
Madison, Wis..	25.7	73.4	— 7.5	— 0.8	— 9.8	+ 0.2	— 6.7	+ 3.6	— 5.1	+ 2.7	—7.2	+1.4
Milwaukee, Wis	25.5	77.8	— 5.2	+ 0.6	— 5.6	— 1.3	— 2.2	+ 5.8	— 1.3	+ 2.6	—3.6	+1.9
Cheyenne, Wy.	28.7	48.9	+ 0.5	+ 1.3	— 1.8	+ 8.0	— 0.3	+ 2.3	+ 0.3	+ 6.7	—0.3	+4.6
Toronto, Can ..	25.2	80.5	— 4.3	+ 5.0	— 6.3	+ 2.0	— 2.8	+ 4.0	+ 0.9	+ 2 0	—3.2	+3.3

less capacity for evaporating the water from the bees, and may be incapable of taking up the larger quantity produced in consequence of the low temperature, unless the air is undergoing constant change by proper ventilation. This evil will be very seriously increased, if the external air is already overloaded with vapor, for the more humid the air the less its capacity for absorbing more water. But a moist external air increases the trouble in another way. We all know that the cold of a damp day is more felt than that of a colder dry one, because the humid air, being a better conductor, the heat of the body is carried off more rapidly. and so with regard to the bees. A damp external atmosphere tends to reduce their temperature still lower, and aggravates the evil first mentioned.

If these views are correct, the losses in 1880-81, in some parts of the country (the eastern part of the State of Maine for instance), should not have been much greater than usual, because there the table shows the temperature and humidity were about normal. Dr. Tinker collected more information regarding the losses of bees and the attendant circumstances that season than any other private bee-keeper. Probably his reports would show the localities in which the losses were least, and those in which they were greatest. It would be interesting to know if a comparison of his reports with the table will show that the localities in which the losses were heaviest correspond with those in which the humidity was greatest. If the reports collected by the editor of the BEE JOURNAL were classified, as to the humidity of different localities, I dare say they would throw light on this branch of the subject.

In connection with the foregoing table, I invite attention to the statement that "in winters, when the cold occurred early, the mortality commenced at an early period; if late, the bees did not appear diseased till near the end of the winter." In this part of the country it was just the reverse in 1880-81, and I would almost venture to say that the reports will show that such was the case generally. The table shows that the cold was most intense in December and January, and that it moderated in February and March; but that, as it did so, the humidity increased to excess in the two latter months. On the 6th of March, I had 4 colonies dead, out of 44 packed in chaff, on Mr. Townley's plan. Before the swarming season came around, I had only 13 good ones and 6 nuclei left. The report of Mr. Geo. Garlick (page 158, BEE JOURNAL for 1881), whose apiary is located about 50 miles east of this place, very fairly shows how the bees died in this part of Canada. On Feb. 1, he had 137 alive, out of 140, on their summer stands, some being packed in sawdust. On March 1, he had 88 alive; on the 6th, 62; on the 15th, 55; on the 1st of April, 42; on the 10th, 12, and on the 6th of May, only 7 were left of the whole lot.

From an inspection of the table one would think it should not be much of a trick to winter bees in some localities, the neighborhood of Cincinnati for example. The ventilation and protection sufficient for hives in that locality would be quite inadequate for the climate of Port Huron or Toronto; the average winter temperature at these points being about 13° colder, and the average relative humidity being over 80°, while at Cincinnati it is less than 68°.

Many other interesting points might be considered, but I trust the table will assist the readers of the BEE JOURNAL to form opinions for themselves, as to the two most important elements of the climate in which they have to winter their bees, and whether they are most injured by severe cold or by cold and excessive moisture combined; the former being present in the early part of the winter of 1880-81, and the latter occurring towards its close.

Lindsay, Ont., June 22, 1883.

For the American Bee Journal.

Two Queens in a Hive.

W. H. SHIRLEY.

There seems to be quite a number of reports of two queens in one hive, this season. I have instanced two queens where the bees were superseding a queen. In the following letter which I have received from J. O. Shearman, he mentions having two queens in a hive:

Our bees seem to not be doing much since the nights turned cool, though button willow is just opening, it does not seem to yield much. I guess it is because the water is so high yet, as to flood it. Bees go to it a little, and then run on red clover the rest of the time. I had a case of two queens in a hive. I saw them both on the 2d of August, on one comb, and not excited at all, and did not seem to notice each other. I had clipped the old queen's wing, to avoid swarming, and I guess I slashed her pretty severely, as I did it with my knife, not having the scissors handy. I think they undertook to supersede her, as I found queen-cells cut up on other combs, or she might have swarmed and then crawled back. She appeared to be "slimmed up," as we used to call it, same as for swarming. The young queen was the largest and brightest colored. What was the cause of your two queens in a hive? Do you know? I left both of mine in, to see how they made out, as they both seemed quiet. How would it do to answer in the BEE JOURNAL the cause of yours? If you do, you might send this in too. I look for a fall run of honey yet, as feed of all sorts is fresh, though the ground is fast getting dry. J. O. SHEARMAN.

New Richmond, Mich.

The case in the BEE JOURNAL, page 373, was of a different kind. I had introduced a young queen, after killing the old one in the hive. Quite a number of young queens get lost on their bridal trip, from melei, on an average say 10 per cent. of them. Now, I think it was one of these queens that dropped down by this hive, where I had introduced one some days before, and was received by the bees all right.

I have found three young queens balled in front of the hives, this season, and in swarming time I frequently find one and two young queens that the swarm had caught when on the wing.

Glenwood, Mich., Aug. 8, 1883.

For the American Bee Journal.

Instinct Compared with Reason.

W. H. STEWART.

Volumes on volumes have been written concerning the organization, powers and doings of the honey-bee without in any way exhausting the subject. The field is unbounded, and ever fruitful. The song of the grove, the aroma of the flowers, and the industry of the bee, have ever been favorite themes with the poet. Dull indeed must be that class of persons who experience no pleasing and inspiring emotions, who are able to read no new and useful lessons from the many facts of pleasing interest that shine out like so many golden threads, so beautifully woven, all through and through the warp and woof of plant and insect life, and more especially that of bees and flowers. How wonderful each new phenomona manifested on every hand as we contemplate the ample field—in the co-relation and inseparable interblending of the vegetable and animal kingdoms; their mutual dependence on each other for the power of reproduction, etc. The new born honey-bee, inexperienced and independent of all instruction, reads on the page of instinct the truth that it is altogether dependent upon vegetable fruitfulness for the only food that can sustain its life.

The plant also, through all its manifold changes from earliest germination in spring-time, feels the delicate touch of the vibrating chord of inter-dependence; and guided by the same law that gave birth and direction to instinct, unfolds its form, ever taking on new and more complex conditions, slowly, yet surely, concentrating its own best life-juices in the forming of the pure nectar to be negotiated with the yet unborn honey bee for a precious morsel of fertilizing pollen.

As we muse, blending our life with these truths, our soul drinks at the fountain of harmony that vibrates along this æolian chord that whispers instinct to the little speck of animate life at its one end, and law to the unfolding plant at the other.

Could we draw aside the mystic curtain that seems to divide between the human and insect planes of life, we should, perhaps, learn that the common Creator had in no way been partial in the bestowal of blessings on his creatures. We would be likely to discover that where one power had been witheld, another, of more vital importance to the individual, had been given.

Man may boast of his reasoning powers, and claim to be the "lord of creation," and to be the rightful possessor of the summit plane of animated life. How few who engage in mechanics or commerce become successful masters even after the labor and experience of many years; yet the little honey-bee emerges from its cradle a master mechanic, able also to move off in the right direction to do its part in obtaining a livelihood for itself and its fellows.

Not only so, but the bee may rightfully claim a more striking superiority over man. At its birth the bee is endowed with the power to step upon the plane of equality with its fellows; to hold and enjoy every right that can in any way enhance the happiness of itself and the colony; able and willing, from birth to old age, to do its part in the support of a regularly-organized government, that administers all needful rights to all concerned. A government that gives full satisfaction through thousands of generations without the necessity of the repeal or modification of a single rule or law.

Should not reason hide its blushing face when it remembers that after thousands of generations of men have labored to discover and frame a government that would give satisfation to all its members, they have failed to make one rule, or enact one law against which some one or more of their fellows would not rebel.

"Raise reason o'er instinct as you can,
In this 'tis God directs; in that 'tis man."

Could bees impart their knowledge by the use of human language, would we not do well to sit in quiet silence and learn wisdom as spoken from an instinctive standpoint? It has been said that "actions speak louder than words;" be this as it may, "one truth is clear." The careful observer may glean many fine and important lessons from the works, habits and unfoldings of the lower forms of life.

O, for the power to penetrate,
Or lift the mystic veil,
And scan each creature's full estate
As each their mission fill.

Granite, stratum, or verdant plane—
Insects, beasts, birds, man—
Trace along the unbroken chain—
My mission in the plan.

To best improve what me is lent,
Nor covet what's witheld;
Act well my part and be content,
In life's most fruitful field.

Orion, Wis., Aug. 2, 1883.

For the American Bee Journal.

Ohio State Bee-Keepers' Convention.

The Ohio State Bee-Keepers' Association will hold a convention during State Fair week, commencing on Tuesday evening. The following programme has been arranged:

Tuesday Evening, Sept. 4.—1. Greetings and organization. 2. Annual report of Secretary and Treasurer. 3. Election of officers. 4. Annual address of the President. 5. General discussion of topics presented by members present.

Wednesday Evening, Sept. 5.—1. Address by S. D. Riegel on improvement in bee-culture as deduced from the season's operations, followed by discussion on the same. 2. Question drawer and discussion on topics presented.

Thursday Evening, Sept. 6.—1. Address or general talk by Vice-President Aaron Benedict, on the rearing and management of queens, followed by discussions of the same. 2. Question drawer and discussion of topics presented.

Conference meetings of bee-keepers and those interested will also be held each afternoon at 1 o'clock in Apiarian Hall, on Fair grounds.

The place of meeting of the convention to be decided at time of the Fair, probably in the upper room of Apiarian Hall.

Everybody who is at all interested in bees is invited to meet with the Association, and all who can bring articles for exhibition, as efforts are being made to render this department a grand success.

The State Board of Agriculture has furnished the bee-keepers a separate hall for their exhibits at the State Fair, with an upper room in which to hold meetings. Ample room will be furnished for all exhibits.

DR. H. BESSE, *Pres.*
D. SPEAR, *Sec.*
AARON BENEDICT, *Sup't. Apiary Hall.*

For the American Bee Journal.

Marketing, and Price of Honey.

JAMES HEDDON.

As our editor has told us in a late number of the BEE JOURNAL, "supply and demand" is the great cause of fluctuations in prices of all commodities, yet sometimes immediate ups and downs in prices are caused by sentiments flowing across the minds of producers; sometimes almost creating a panic in prices.

It is my opinion, at this time, that bee-keepers over the country generally have too much of an idea that our present crop is going to be enormous, and sell at a low figure. I got frightened myself, and put 200 pounds of comb honey on our market in the shape of an out and out sale, 2 cents lower than I need to have done. There is $4 charged up to scare.

There is a considerable quantity of honey produced about here this season, notwithstanding the fact that we have not an average crop, because of the improvements in methods and fixtures. The crop coming in rather late, a good many country producers held off from putting honey on this market from the fact that so much was produced here in my apiaries. The merchants have held up the old-time prices, which, from all indications, will carry through the year. Notwithstanding I have been very busy with many other duties besides marketing honey, duties that most other producers do not have, I have thought it a duty, and have taken upon myself the burden of manufacturing honey stands. These I made with sloping shelves for jars of extracted honey, and case in top with glass front, and back door for comb honey. I have introduced, and am keeping supplied one of these in each of the principle groceries in our little city. By this means I hope to market 3 times as much honey at home as I did last year, even at the same price.

Two things make honey sell rapidly. First, putting up and keeping it in attractive shape and place; and second, reducing the price. Between the two I believe that the first is the best card for the producer, and is far less expensive. Let all honey producers do this as far as possible. Let them also be in no great haste to market the crop. Honey sells best in cool weather, and is by no means a perishable article, and even grows of better quality if properly kept.

While there may be honey enough to glut the market of a month, it is my opinion that there is not enough to overstock the markets of the year. All we need is to act as a body, and put our honey into market along as demanded, at a reasonable price, instead of panic-stricken like, rushing it all in at once to catch what we believe to be the highest price, which will almost surely turn out to be the lowest price for us.

The best guide I can think of to be governed by as to when to put honey on the market, is to market it only when it seems to be called for at reasonable prices. This, of course, is owing to quality of honey and location. I will give you my own individual standard. We live in a pretty good honey-producing locality. We raise more honey than can be consumed at home. Some of it must be shipped to the great cities of this and other countries.

When I realize 18 cents per pound (it then sells at 20 cents retail) for a nice article of comb honey in one-pound sections, or 25 cents per pound in half-pound sections, and 15 and 20 cents per pound for colored fall honey in one and half-pound sections, and 12½ and 10 cents per pound for extrated, early and late, I am ready to supply such demand, not otherwise.

Just a word regarding half-pound sections. I intend, when the season is closed, to give the benefit of the experiments my class and myself have made regarding half-pound sections. How we like them, how the bees like them, and how my customers like them; also regarding honey boards, cases, broad frames, and various other things. But will say just here that the half-pound sections seem to be a great favorite in the markets around about our little country towns.

Dowagiac, Mich., Aug. 8, 1883.

For the American Bee Journal.

Excellencies of the German Bee.

A. W. OSBURN.

While the praise of the different races of bees, the Italians, the Holy Lands, Cyprians and others is being sounded far and wide; and while the best talent of our country is being engaged to bring more prominently before the public the superior qualities of the above named races, there are but few that have the boldness to come forward and advocate the good traits of character of the German bee (not the black). I know that one who has the independence to advocate the good qualities of the German race of bees, must expect to call down upon his head the scorn, the disapprobation and disgust of the great mass of bee-keepers of to-day.

Let us go carefully over the ground and see if the German bees have not some traits, that the honorable bee-keeper is bound to respect. In the first place they excel as comb builders; they excel as rapid workers to draw out foundation; they excel as pioneers to strike out from the brood-chamber (and out of the queen's way) to store their honey; the queens thus having no honey to bother them, can fill their combs from top to bottom, and from end to end; they excel in keeping their hives full of workers to gather the crop; all other conditions being favorable, they excel as non-swarmers, when you give them plenty of room.

While I would not wish to be understood that I think the German bee possesses all the good traits to be desired in "the coming bee," yet I would wish them to have credit for what good there is in them; and that their good qualities shall not be ignored when looking around for material to make up that loug-looked-for *Apis-Americana*. I am satisfied, from my own experience, that the crossing of the different races makes better business-bees than either bred pure. It is our intention to try the experiment of mixing the best strains of Italians, Germans and Holy Lands together, and see what the coming bee from these three races will be. I have no fear of the result; there is not one of the three but what have excelent qualities, but the fine point is to combine them all in one.

I am aware that some of our most successful apiarists are prejudiced against the German and Holy Land bees, but let them dispute the good traits I have mentioned in the Germans, if they can, or the prolificness, fleetness of wing, and ambition of the Holy Lands. For me to advocate the good qualities of the Italians would be for me to take up your valuable room for nothing, for they are too long and favorably known; but for me to say that they possess all the requisites of what we will wish "the coming bee" to possess, would be as foolish as the other.

Water Valley, N. Y.

For the American Bee Journal.

Finding the Queen.

F. M. CHENEY.

My method of finding the queen in populous colonies of black bees is as follows: Early in the morning, I go to the colony containing the queen I wish to supersede, and divide it, placing half the combs and bees into an empty hive. In a few minutes one of the hives will show queenlessness by the bees running over the front of the hive. I place this hive on the stand, and take the other, which contains the queen, several rods away. Near night this hive will be so thinned of bees that the queen can be easily found, and after obtained, the bees can be returned. I concluded one swarm was queenless, but by dividing I found it was not, and captured the queen which had ceased to lay, although she was only one year old, and had been prolific previous to this.

South Sutton, N. H., Aug. 1, 1883.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Getting Bees Out of the Cases.

Will Mr. Heddon please tell us how he gets the bees from the cases when he takes them from the hive?

SAMUEL FISH.

Milan, O., July 31, 1883.

ANSWER.—Our method of getting bees out of sections is as follows: Now, you will remember our sections all have open tops, and the opening is ⅜ of an inch wide. When we uncover the case before removing, we blow the smoke between the sections, by passing the nozle of the smoker across each row, as we press the bellows. Four repetitions of it, in rapid succession, starts nearly every bee downward. Inclined to fill himself with honey, and there being none uncapped above, he immediately starts below. We now blow with our mouth a lively cool blast across the ranges, the same as we did with the smoker. This drives them more than smoke, after being smoked. Now, as you lift your case, there should not be more than 40 to 100 bees left in it. Next we remove the case to our 6 foot square summer house; the upper half of which is wire cloth all around, and two of its sides are doors. In this house we pile up the cases crosswise to each other. The bees immediately go on to the screen, which screen is double, and prevents the feeding of outside robbers through the net work. Now you can remove the cases to the honey house free from bees. Throw open the doors and the bees return to their hives. In place of such a screen house, a revolving window, or similar device in any room, may be used.

Comb Foundation for Surplus Honey.

MR. HEDDON:—In the BEE JOURNAL of July 25, replying to W. B. Dresser, of Michigan, you say: "I use full size pieces of foundation," etc. You were referring to section boxes. Do folks generally eat comb honey made on comb foundation? Somehow I was under the impression that it is not very clean or wholesome, and was only intended for brood and extracted honey. I think I should bite it with my eyes shut, and not smack my lips much. But then, it may be I am prejudiced just a little, and not in the spirit of advanced and enlightened bee-culture. I use foundation, but in the brood-chamber, with a very small bit in the honey boxes for a starter, not enough, you know, to hurt; and may be you will say, not enough to do any good, either. Please say something about this article (foundation) as to its purity as food, etc.

W. P. HANCOCK.

Salado, Texas, July 30, 1883.

ANSWER.—My rule in selling any commodity to my brother man, is the one laid down by that great and loving reformer, Christ. "Do unto others as ye would that they should do unto you." Almost all will admit that it is our duty to do so; but all do not see the fact that we likewise owe a duty to ourselves, and it is a second duty, to stop right there, in very many instances.

For three years, and at a time before manufacturers were making a very delicate foundation for surplus combs, or, at least, before I obtained any, I used full sheets of foundation in all my sections. No person in this county, except myself, knew there was such a thing as comb foundation. I sold this honey in my home market readily, and only one person during that three years ever made a remark regarding it, that came to my ears. Getting hold of an unfortunate piece, one man observed: "That honey I got of you seemed to have too tough a comb." Large numbers spoke the praises of my comb honey. So much for the effect upon the trade.

Now, in regard to the healthfulness of wax. So far as I can learn, nothing is more wholesome to take into the stomach than honey comb. Being perfectly indigestible by the human stomach, no effort is made to digest it. In eating warm biscuit, the particles of comb intermingle all through the dough in such a manner as to give the gastric juice of the stomach a better chance to do its work. Particles of wax are smooth, not harsh or irritating to the stomach or intestines, and the chemical effects are said to be slightly stimulating.

Now, as regards cleanliness of the foundation. Of course to persons who do not know what they are eating, if there are no ill effects, no harm is done. To those who do, and who are prejudiced against it, as Mr. H. may be, allow me to say, let us reason together. Trusting that the reader knows chemically of what impurities consist, we will pass by, asserting that high degrees of heat destroy all impurities. The degree of heat which is brought to bear, when rendering wax, destroys all impurities that may be lurking about the combs melted. I consider that when properly rendered, beeswax is as pure and wholesome for chewing gum as any nugget found upon the spruce tree.

Since I have been making comb foundation, and receiving students, I have had a large number of assistants in the wax room, and I have never had one but was more or less of the time chewing scraps of wax. Neither have I ever had one, who has been with the honey, from the cake of beeswax to the delicate white combs upon the table, who spleened against the use of comb foundation for surplus honey. What is good enough for me is good enough for my customers. What is not good enough for me, is *not* good enough for my customers.

Kentucky Bee and Honey Show.

The Kentucky State Bee-Keepers' Association will hold its annual meeting in Louisville, Ky., Aug. 29 and 30, at the Southern Exposition building. We hope to have a large attendance of the bee-keepers of the State, and also of other States, both North and South, as the convention will be in session during the week of the Honey and Bee Exhibit. And premiums amounting to $60 are offered by the commissioners of agriculture of Kentucky, for Kentucky honey, and $40 by the Exposition, for the finest Italian bees in Observatory hives. The premium on bees is open to the world, and we hope to see a fine display.

The Bee-Keepers' Convention and Honey and Bee Show will be held in the same week of the great exhibition of fruit, for which over $2,000 in cash premiums will be paid.

We extend a cordial invitation to all bee-keepers' societies, to editors of bee publications, to honey-producers, and queen breeders, and all who are interested in apiculture, to be with us. We hope to have the father of modern bee-keeping with us, the Rev. L. L. Langstroth, to whom a cordial invitation has been given.

Reduced fair on all railroads, both North and South, will be offered to all who attend the Great Southern Exposition. It will doubtless be the grandest exposition ever held in the United States, in magnitude, and nearly equal to the Centennial.

N. P. ALLEN, *Sec.*

☞ The Northwestern Iowa, and Southwestern Wisconsin Bee-Keepers' Association, will hold its next meeting on Sept. 4, 1883, at John Swanzey's, 2 miles South of Ridot, Stephenson County, Ill. There will be facilities to take persons from the station to Mr. Swanzey's.

JONATHAN STEWART, *Sec.*

☞ Do not let your numbers of the BEE JOURNAL for 1883 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

SELECTIONS FROM OUR LETTER BOX

Bees Feet Disabled.

I send eight worker bees (taken from as many hives) with clogs of something on their feet. Is it from some blossoms they are working on? I have kept bees now for ten years, but never saw the like before. The bees are carrying these all out of the hives. I find the most of these clog-footed bees in the colonies that are working the strongest. Bees have not done much since white clover bloom, until to-day, when they are working very brisk through the middle of the day. Please let me know through the BEE JOURNAL what it is on the bees' feet. Will it amount to enough to reduce the colonies? If so, what is the remedy? I had an immense run on clover.

E. J. SCOFIELD.
Hanover, Wis., Aug. 6, 1883.

Enclosed find foot, leg and something else. Two of my colonies of bees are affected, as you will see, by the foot and leg, as it is the foot and leg of a bee. Please examine and tell, in the BEE JOURNAL, what it is and the remedy. DR. J. COOPERIDER.
Taylorsville, Ind., July 31, 1883.

[The objects attached to the feet of the bees, are the pollen masses of milkweed (*Asclepias*). The bees visit the flowers for the nectar which is abundant, but the arrangement of the parts of the blossom is such that they cannot gain access to the sweet fluid without coming in contact with a sticky substance at the end of these pollen masses, which are thus pulled out and carried from flower to flower. There is no cure except the destruction of the plants.—T. J. BURRILL.]

Not Half a Crop of Honey.

My brother and I represent 400 colonies of bees, which have been handled scientifically for comb honey, in the best section of this State. The beginning of the honey flow was grand, but the sudden cut off ten days ago, has made it a certainty that not a half crop will be taken.

E. A. MORGAN.
Columbus, Wis., Aug. 2, 1883.

Cyprians for Honey Gathering.

Up to noon, to-day, I have, this season, taken 308 lbs. of pure white honey from one colony of Cyprians; the honey is remarkably fine, clear and heavy. For the last five days, particularly noted, the daily yield has been from 10 to 12 lbs., and I reasonably expect 400 to 500 lbs. of white honey, this season, from this colony. The queen is not yet a year old; she has had no help from any other of my 85 colonies in the same yard or from any other source; every bee of the colony that has aided in producing this 308 pounds, has been hatched from her eggs, and, besides, I have made 7 nuclei from her, and her young queens appear equally promising. Basswood bloom has been good, but is getting past its best now. White clover has been abundant. This locality has had a good honey harvest, notwithstanding the heavy rains and cool weather. There are about 500 colonies of bees kept within the area of half a square mile, and large apiaries within a few miles, are all prospering this season.

GEO. M. LAWRENCE.
Warsaw, N. Y., Aug. 7, 1883.

Bees in Georgia.

My bees are doing better than they have in several years. Up to June 1, they did not do much but swarm, but during the month of June they stored honey fast, and then it set in dry, and they did not do much for a while; but at this writing they are making the air sing with their delightful hum, and I am encouraged with the prospect, and am going to begin extracting in a few days. I have 76 colonies in fine condition; some of them have no room for brood rearing, and I must give them room. There is no other person with the movable frame hive in this section but myself; they say they cannot have luck with bees, but if they would take the BEE JOURNAL a few years, and use some *pluck*, they would have *luck*. I delight in working with bees, and am always glad to see the JOURNAL come. Success to it.

H. M. WILLIAMS, M. D.
Bowdon, Ga., Aug. 1, 1883.

Bee and Honey Show.

Our Inter-State Fair opens at St. Joseph, Mo., Sept. 5, 1883. We expect a large attendance of bee-keepers, and we shall try to make it a good bee and honey show. I wish to say, through the BEE JOURNAL, that all bee-keepers, of any State, are invited to assist us in making a good display of honey, bees, queens, and bee-keepers' tools. Those who cannot come may send articles to me, and they will be exhibited. Our Fair will be good place to advertize bee-keepers' goods, (by exhibiting), as bee-keeping is on the increase. I shall not show anything in this department, for premiums, (being superintendent), but expect to exhibit at other Fairs, and I am willing to exhibit all books, papers, and other light articles, for others, if requested to do so, free of charge. Our bees have swarmed a great deal, and gathered some nice honey. We are having plenty of rain, and look for a good fall crop. D. G. PARKER.
St. Joseph, Mo., Aug. 2, 1883.

A Word about Transferring.

Three or four years ago I had occasion to transfer 4 or 5 colonies of bees from box to frame hives, and not liking cutting up brood combs and fitting them in frames (having tried it once), I placed the box hives on the top of the frame hives, full of comb, or full of sheets of foundation. This can be done with any shape of a box, as I nailed strips or thin pieces of boards on or under the uncovered parts, making it bee-tight, except the entrance to the lower hive. This forces the bees to pass through their new home. Now, if you do your part right, you will be delighted to see how soon the transferring will commence; they will begin to occupy it for all purposes, store room, dining room, bed room, excepting a parlor, which is out of date with my bees (I bought some of them from James Heddon). In a few days (say a week) I lift the box hive off and examine the lower hive; if they are well started, and you find the queen there, remove the box to a new stand only a few feet away, if you wish to unite the second drive with the first. For uniting keep moving the hives nearer together, a few inches each day, so that they will be close together by the appointed time, which will be 21 days, in this case, when your old combs will be ready to extract from and melt up, after driving out the bees. Mr. Heddon has given other particulars to be observed in transferring so thoroughly that I take much pleasure in referring any one interested in transfering bees, to his article on page 367. W. HARMER.
Manistee, Mich., Aug. 3, 1883.

Poor Dry Season in Texas.

We are having a pretty dry season just now. Bees are working on cotton bloom and scattering wild flowers. I had 3 colonies to start with in the spring; have 8 now, all in good condition. I have not taken much honey this season. M. C. GRANBERRY.
Austin, Texas, Aug. 6, 1883.

Unprecedented Honey Crop.

The honey flow here has been unprecedented and unlooked for. My best colony has given over 600 pounds of honey, up to date—over 100 pounds being comb honey, and I expect to get upwards of 700 pounds from it. The colony spoken of, carried in from 20 to 28 pounds of honey per day for nearly a week. I think there are upwards of 100,000 bees in the hive; it is a two-story one. E. F. SMITH.
Smyrna, N. Y., Aug. 7, 1883.

No Honey Glut, this Year.

It is interesting to read the items in regard to the honey production of the country. I have fully come to the conclusion that we have not, and there will not be a honey glut this season. Some bee men in the best part of the honey flow hawked their honey around at a shilling a pound. They should not be in haste. This section won't glut the honey market. I think that I live in a great honey-producing State, and white clover was bountiful, and is our greatest and best honey-producing plant. Basswood came and went without giving us a smell. Buckwheat is splendid, averaging 4 feet high, and gives a perfect sea of bloom, but producing little honey. I say, do not be in haste.

JOHN GOCHENOUR.
Freeport, Ill., Aug. 6, 1883.

[The way to keep up prices, is to supply the market only as fast as it is needed.—ED.]

Sweet Clover Honey.

Bees doing well, but not as well as H. W. Garrett's, of Coeyman's Hollow, N. Y. I was there yesterday, and Mr. Garrett took me through his apiary to show to me his box honey, which was very fine, and from 30 to 60 pounds on almost every hive, ready to come off. It was enough to make any bee man wish for acres and acres of sweet clover, that being what they have obtained so much honey from. No bee-keeper can afford to be without sweet clover. My opinion is that bee-keepers will have to cultivate honey-producing plants if they expect to make the business pay.

A. SNYDER.

Clarksville, N. Y., July 25, 1883.

Not Half a Crop of Honey Here.

We have had, so far, not half a crop of honey; not one-half of my bees have swarmed, which showed that honey was not plenty. My 50 colonies hardly making a living for the last two weeks; if it should continue a few weeks longer, I shall have to give them back the surplus, to save them. There was no honey from basswood this year.

H. T. HARTMAN.

Freeport, Ill., Aug. 4, 1883.

Hoary Vervain.

I send you two blossoms and two leaves of a plant that grows here in pastures and low ground. Bumble bees and honey bees work on it from morning until night. Is it a good honey plant, and what is its name (common name?) Bees have done very well so far, and we think there will be a good flow of fall honey if we have some more rain.

J. F. SELLERS.

Reynolds, Ill., July 24, 1883.

[The plant is the Hoary Vervain, or *Verbena stricta*. We have several wild verbenas which, though in appearance very unlike the popular cultivated flower of that name, are, botanically, closely allied, and are all good honey producers.—T. J. BURRILL.]

Poor Crop of White Honey.

The white honey crop in this section, the season for which is just closed, is light, and the prospect for a crop of dark honey is poor, the weather is so wet and cold. However, we shall have a large bloom, and if it should clear off warm, in a few days, I shall get some honey.

EDWIN THEW.

Saranac, N. Y., Aug. 5, 1883.

Italians Working on Red Clover.

We have had a heavy honey dew on the yellow willow since the 2d inst. The white clover and catnip bloom was immense. Bees are doing pretty well. I saw quite a large number of Italian bees working very busy on red clover this morning. I have both hybrids and Italians.

S. D. McKINLEY, M. D.

Melrose, Iowa, Aug. 7, 1883.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

How to Create a Market for Honey.

We have now published another edition of the pamphlet on "Honey as Food and Medicine," with more *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy **5** cents, postpaid; per dozen, **40** cents; per hundred, **$2.50**. 500 will be sent postpaid for **$10.00**, or 1,000 for **$15.00**. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit. Try it, and you will be surprised.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

☞ Do not send coins in a letter. It is dangerous and increases the postage unnecessarily. Always send postage stamps, for fractions of a dollar, and, if you can get them—*one-cent* stamps; if not, any denomination of postage stamps will do.

Our Premiums for Clubs.

Any one sending us a club of **two** subscribers for 1 year, for the Weekly, with **$4**, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For **three** subscribers, with **$6**, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For **four** subscribers, with **$8**, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For **five** subscribers, with **$10**, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies	(120 pages)......	$1 00
" 100 colonies	(220 pages)......	1 50
" 200 colonies	(420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a statement of account every week.

☞ May we ask you, dear reader, to speak a good word for the BEE JOURNAL to neighbors who keep bees, and send on *at least one new* subscription with your own? Our premium, "Bees and Honey," in cloth, for one *new* subscriber to the Weekly, or two for the Monthly, besides your own subscription to either edition, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

Bingham Smoker Corner.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent post-paid for **$1.75.** Address,

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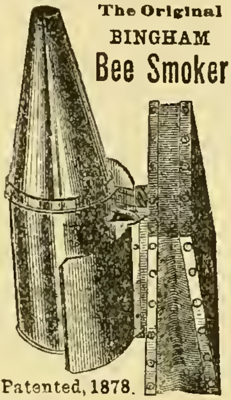
Abronia Mich.


The Original
BINGHAM
Bee Smoker

Patented, 1878.

CYPRIANS CONQUERED.—All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's "Conqueror Smoker" did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham.
G. M. DOOLITTLE.
Borodino, N. Y.,
Aug. 15, 1882.

EXCELLING ALL.—Messrs. Bingham & Hetherington, Dear Sirs:—I am now selling your Smokers almost exclusively. You are excelling yourselves in smokers all the time.
Respectfully,
J. G. TAYLOR.
Austin, Texas, May 10, 1883.

THE VERY BEST.—The Bingham "Conqueror" Smoker is the very best thing I have tried in that line.
M. M. LINDSAY.
Fulton, Tenn., July 24, 1883.

◆

During the following three months, Bingham Smokers will be sent post-paid, per mail, on receipt of the following prices:

The "Doctor"..	(wide shield)—3½	in. fire tube,	$2.00
The Conqueror	(wide shield)—3	in. fire tube,	1.75
Large..........	(wide shield)—2½	in. fire tube,	1.50
Extra..........	(wide shield)—2	in. fire tube,	1.25
Plain..........	(nar. shield)—2	in. fire tube,	1.00
Little Wonder..	(nar. shield)—1¾	in. fire tube,	.65
Bingham & Hetherington Uncapping Knife..			1.15

With thanks for letters of encouragement, and the absence of complaining ones, we tender to our thirty-five thousand patrons our best wishes.
Very Respectfully Yours,
BINGHAM & HETHERINGTON.
Abronia, Mich., June 1, 1883.

Special Notice.—We will, hereafter, supply the Weekly BEE JOURNAL for one year, and the seventh edition of Prof. Cook's Manual of the Apiary, bound in fine cloth, for **$2.75**, or the Monthly Bee Journal, and the Manual in cloth for $1.75. As this offer will soon be withdrawn, those who desire it should send for the book *at once*.

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

◆

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

◆

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

COMB HONEY WANTED.

We are prepared to purchase large lots of Fancy COMB HONEY in 1 and 2 lb. sections, or Harbison frames, for which we will pay an advance of 5 cts per pound over New York prices. **CASH ON DELIVERY** in sound condition in London; the price of extracted honey will be paid for all broken combs. This is an excellent opportunity for bee-keepers wishing to visit Europe. Correspondence solicited. **W. M. HOGE & CO.,**
The Apiary, Leconfield, Rd. N.,
33Atf LONDON, ENGLAND.

JOB PRINTING.

HONEY LABELS

A SPECIALTY.

SEND FOR PRICE LIST.

GEO. M. GRAY,
33ABlt **MEDINA, OHIO.**

ITALIAN BEES AND QUEENS.—One Queen, not tested, $1.00; tested, $2.00. Bees, one colony, $7.00; five colonies or more, $6.50 each.
S. A. SHUCK,
33D2t BRYANT, Fulton Co., ILL.

W. Z. HUTCHINSON,

Rogersville, Genesee County, Mich.,

Makes a **Specialty** of rearing fine ITALIAN QUEENS. All Queens bred from imported queens, and from the purest and best home-bred Queens, and the cells built in full colonies. No black bees in the vicinity. Customers can have either light or dark Queens. Orders filled **Promptly.** Single queen $1.00; six queens for $5.00; twelve or more, 75 cents each. Tested queens, $1.50 each. Safe arrival guaranteed. "All Queens sent out are reared by himself." Make Money Orders payable at FLINT, MICH. 31Dtf

THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published monthly, and contains the best practical information for the time being, showing what to do, and when and how to do it. **Rev. H. R. PEEL, Editor.**

We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal*, both for $3.00 a year.

BEES FOR SALE.—100 colonies of Bees in Modest frames (size 11x12½), mostly Hybrids. Also 120 Modest Hives complete. Price, $3.00.
A. E. WOODWARD,
32A6t GROOM'S CORNERS, Saratoga Co., N. Y.

BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN.

Editor of the Weekly Bee Journal.

925 West Madison Street, Chicago, Ill.

Mrs. J. F. Upton gives the following notice of this book in the Bath, Maine, *Sentinel:*

A guide to the management of the apiary for profit and pleasure, by Thomas G. Newman. This work is designed to initiate beginners in bee-keeping in all the secrets of successful bee-culture. Beginning with the different races of bees, the author takes his readers along step by step, carefully explaining the different kinds of bees, illustrating each kind with the eggs and brood, explaining the terms used, the production of wax and comb, and the work done by these wonderful insects. The establishment of an apiary is next considered; the best location, time to commence, how many colonies to begin with, what kind of bees to get, how to care for a first colony, keeping bees on shares, changing the location, all of which it is indispensable for a beginner to know. It is also important to know which kind of hive is the best, how to procure the best comb honey, how to procure it for market, how it should be marketed, what to do with candied comb honey, and how to extract honey. The scientific management of an apiary is then entered into, and illustrations of all the necessary applicances introduced. There is a chapter devoted to the honey extractor and its use, and another to comb foundation and its use. The various honey-producing plants and trees are named and illustrated. Various methods for exhibiting bees and honey at county and state fairs are described. The best and safest plans for wintering bees are discussed, the book closing with some general advice to beginners. The author says of his book on Bees and Honey, "it was not designed to supersede or supplant any of the valuable works on apiculture already published, but to supply a want for a cheap work for the beginners." We most cordially recommend this work not only to beginners, who will find it invaluable, but to all who are not already familiar with the lives and movements of these industrious and intelligent little workers. The information to be gained as to their habits, manner of breeding, intelligence, energy and wonderful instincts, by reading this book alone, is enough to make one regard the bee with admiration and amazement.

PRICE—Bound in cloth, **75 cents**; in paper covers, **50 cents**, postpaid.

THOMAS G. NEWMAN,
925 W. Madison St., Chicago, Ill.

☞ **A Liberal Discount to Dealers by the Dozen or Hundred.**

OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

VOL. XIX. CHICAGO, ILL., AUGUST 22, 1883. No. 34.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

Canada Thistles for Honey.

Dr. J. C. Thom, of Streetsville, Ontario, has written to the *Canadian Farmer*, wondering why the Canada thistles should not be mentioned in the newest bee books among the honey-producers. It has often been mentioned in the BEE JOURNAL as such, but as it is an objectionable pest, and should not be encouraged, even if it is a good honey-producer. The Doctor says:

I can only account for the omission of any notice in these works of a very important source of honey in Canada by the supposition that it is rare in in the United States. As the States of Michigan and New York are our immediate neighbors, I am at a loss to understand why it has not yet crossed the borders and taken the oath of allegiance, it being essentially aggressive, migratory and tenacious in its characteristics. It is now naturalized over the large extent of country, extending from Quebec to Sarnia. Its flowering season extends from the latter end of June to the same time in August. It may be fairly relied upon for a continuous flow of honey. It ranks, in my estimation, scarcely second to clover and basswood.

During the season of 1882, when all other sources of honey seemed to fail in this region (even clover and basswood), the thistle came to the rescue of 100 starving colonies in my apiary, and in the space of 15 days they had accumulated from that source alone sufficient winter stores. The present season, with an abundant flow from clover, and a partial one from basswood, the thistle has as usual made its delicious aroma perceptible in the extractor, making glad the hearts of bee-keepers. The honey from this source is rather thinner than that from clover, clear, not inclined to granulate, of a delicious flavor and aroma, only to be recognized by those who have passed through fields of ripening grain purple with thistle heads nodding to the breeze.

Beeswax.—Concerning the boiling of beeswax and preparing it for the market, an exchange remarks as follows:

It is found that the larger the cakes of wax are the better it keeps, and the higher price it brings. Also, that the more gently it has been boiled, the better it likewise is; for too hasty boiling renders it hard, and this increases the difficulty in bleaching it.

☞ The Premium List of the Maine State Agricultural Society is received. It shows premiums amounting to $60 on bees and honey. Any one interested can get a premium list by sending to Mr. A. L. Dennison, Sec., Portland, Maine; or to Mr. Horace B. Cony, Angusta, Maine, who writes us as follows: "While our premiums are small compared with other States, still it is something, and if bee-keepers will attend and exhibit, we can do better hereafter. This is our first attempt, so we could not expect much."

Ontario Convention.

The third annual general meeting of the Ontario Bee-Keepers' Association will meet in the City Hall, Toronto, on Tuesday, the 20th day of September next, during the second week of the Industrial Exhibition. As the North American Bee-Keepers' Covention meets at the same time and place, it has been arranged that the two bodies hold joint meetings in discussing matters pertaining to our common interests, as the leading bee-keepers of America are to be present. This will, undoubtedly, be the most interesting meeting of apiarists ever assembled in Canada. The venerable Mr. Langstroth and all the prominent bee-men of the United States are expected to be present. A profitable time is anticipated, and a good turn-out requested. The convention will last three days. A meeting for the purely business work of our association will be held sometime during the convention, of which due notice will be given. R. MCKNIGHT,
Pres. Ontario Bee Association.

Preparing Bees for Winter.

In the *American Agriculturist* for September, Prof. Cook writes thus:

The apiarist should prepare his bees for winter as soon as the frost makes all farther gathering of honey impossible. Examination will show whether there is sufficient honey stored to winter the bees. If the frames, just as they are taken from the hives, containing bees, honey and comb, weigh 30 pounds in the aggregate, then there is enough honey. If not, good thick honey, or thick syrup, made by dissolving granulated sugar, should be fed at once, so that all cells may be capped over before the cold days of October check the labors of the hive. It is best that the honey be so abundant in the frames that we need not give the bees all the frames used in summer. It is better to use not more than 7 or 8 Gallup or American frames, and not more than 5 or 6 Langstroth frames These are confined by division-boards. It is best to carefully exclude pollen. Frames of pollen are set aside, to be returned when breeding is resumed the succeeding spring.

The bees may easily change the position of the cluster in the cold days of winter, and it is desirable to cut small holes the size of a thimble through the combs, an inch or two above the centre. Cover above the bees with sacks of dry sawdust, which should be long enough to reach over the division-boards and to the bottom of the hive. These protect the bees from the extremes of heat and cold, and promote healthfulness. Thus prepared, the bees to be wintered in chaff hives on their summer stands, will need no further care until the succeeding April. If the bees are placed in the cellar, they need not be touched again until just before winter comes, when they are to be taken in.

☞ Mr. E. F. Smith, Smyrna, N. Y., writes: "I should have been more explicit about my report. The colony, and its increase, have given 761 pounds to date. My apiary report will soon be forthcoming, and will show more than an average of 200 pounds per colony.

Another Bee Paper Dead.

It is but a year ago that we chronicled the death of the *Bee-Keepers' Instructor*, which died for the want of sufficient support; now the *Bee-Keepers' Exchange* has died from the same cause. The *Bee and Poultry Magazine* of New York City will fill out the unexpired subscriptions, and thus none of its subscribers will suffer pecuniary loss. Mr. T. O. Peet, the late editor of the *Exchange*, in the *Bee and Poultry Magazine* for August, says:

> We remember writing, when the *Instructor* collapsed, that it was, perhaps, a victim to the law of the "survival of the fittest," and made our brags that the *Exchange* still lived. We did not think then that ere a year had elapsed we should be writing the obituary of the "*Exchange*," but so it is, and it corroborates the fact that we know very little of the future, and should be very careful how we talk and presume upon it.

"One comes and another goes." During the past year two bee papers have ceased to exist, but still the number remains the same as then, for *two* more have been born during that time—the *Apiarist* in Maine, and the *Apiculturist* in Massachusetts.

For some years there has been a mania for starting bee papers, which live but a few months or years, and then *die* for want of support. Which one is next to succumb, we know not, but we expect "the survival of the fittest."

The two that have lately died were selected to receive the support of the "co-operatives;" whether this was "the last straw that broke the camel's back," we do not know, but certain it is that they gave up the *ghost* in rapid succession. We learn that the co-operatives are casting around to make another selection for their organ—but it will be wisdom for the papers so approached to *beware*, and profit by the fate of those that have preceded them as organs of discontent. Bee-keepers generally have no relish for such elements of discord, and will surely stamp their disapprobation by withdrawing their support from papers that encourage discord and malevolence.

It will be far better not only for their personal comfort, but also for the public good—if these men will cease their efforts to set the bee-keepers of the East and West at variance, and unite heartily in every good work to extend the usefulness of the bee periodicals now existing, and join in the bonds of unity the bee-keepers of the entire country, and thus aid the advancement of apiculture every where — for unity is strength; division is death.

Good.—The Fremont. Mich., *Indicator*, of Aug. 9, says:

> George Hilton has taken 1,833 pounds of surplus honey up to Aug. 4, from his 35 colonies of bees, spring count. He says, judging from the amount now on hand, that they will double the amount before the season closes. His apiary now contains 58 colonies.

On Aug. 11, Mr. Hilton wrote us as follows: "I have to-day taken 383 pounds more of as fine comb honey as I ever saw, making 2,216 pounds up to date. Bees are still doing something on white clover. Our fall flow has not commenced yet."

Trial Trip—25 Cents.

As the season for Fairs has arrived, and wishing to be able to reach several thousands of the old-fashioned bee-men, and by the aid of the BEE JOURNAL to lift them up to higher ground, adopting newer methods and progressive ideas, we make the following very liberal offer: We will send the Weekly BEE JOURNAL *three months on trial, for 25 cents.* In order to pay for getting up Clubs, we will give a copy of Fisher's Grain Tables, or Scribner's Lumber and Log Book, to any one who will send us five trial subscriptions (with $1.25); for a club of *ten* we will give a cloth copy of Bees and Honey; for a club of 15, a cloth copy of the 7th edition of Cook's Manual of the Apiary; for a club of 25, we will present both the Manual and Bees and Honey. If any one wants these Books for nothing, here is on excellent opportunity to get them for a little exertion.

☞ The Mendota Union Fair will be held at Mendota, Ill., Sept. 3, 4, 5, 6, 7 and 8th, 1883. In the department for the apiary we notice the following premiums, Mr. H. W. Wixom being Superintendent:

Best and greatest display of honey........	$5	$3
Best sample of honey, not less than 5 lbs.	3	2
Best swarm of bees........................	3	2
Best bee hive for all purposes, combined.	2	1
Best display of bees, hives and surp. honey.	Diploma	

Committee—M. S. Tinker, Mendota; Andrew Winters, Mendota; Jos. Lewis, Arlington.

☞ Articles for publication must be written on a separate piece of paper from items of business.

Bee Convetion at Toledo, O.

The next annual meeting of the Tri-State Bee-Keepers' Association will be held on the 12, 13 and 14 of next Sept., during the week of the Tri-State Fair at Toledo, Ohio. It is customary to say that Messrs. So and So, "and other prominent bee men will be present," etc., etc. Well, we have quite a number of "prominent bee men" (prominent at home) in this region, and they know how to raise the bees, get the honey, cure foul brood, and winter the bees too; but if Mr. Heddon is well enough to be at the meeting and the fair, we will pump him on wintering, and Mr. Muth on foul brood, and Novice, if here, on general principles, and the the editor of the BEE JOURNAL to fill in where the rest lack. We do not expect to have any long essays or speeches. It being the week of the fair, we expect the great attraction for bee-keepers will be the Bee and Honey Show, and such bee-keepers and their friends as desire to stay several days can bring their "eatables" and blankets with them, and camp on the fair grounds. One or more tents will be provided for such as make application to me a few days before the fair, at a cost that will pay for the use of the tents, but we hope to be able to borrow tents and so save expense.

A premium is offered for the foundation machine making the best foundation for the brood-chamber on the grounds, and two mills have already arrived for that purpose, and the makers of three other machines have promised to be here if possible.

A premium list with entry blank rules and regulations, railroad fares, and freight rates, etc., will be sent free to all applicants.

DR. A. B. MASON.

Wagon Works, Ohio.

☞ The new two-cent postage stamp is to be of a metallic red color, with a vignette of Washington. It will supersede the present three-cent stamp on the 1st of October.

Fall Catalogues.—We have received Catalogues of Strawberry Plants, etc., for the autumn of 1883, from R. H. Haines, Moorestown, N. J., and Ellwanger & Barry, Rochester, N. Y.

Fairs.—To any one exhibiting at Fairs, we will send samples of the BEE JOURNAL and a colored Poster, to aid in getting up a club. The Premiums we offer will pay them for so doing. For a club of 8 subscribers to the Monthly BEE JOURNAL, or 4 Weekly, we will present Dzierzon's Rational Bee-Keeping, price $2.00.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

A Clergyman's Success with Bees.

The Iowa City *Republican* has a long article concerning the apiary and management of the Rev. O. Clute, in that city, from which we extract the following:

Our townsman, Rev. O. Clute, has for several years made bee-keeping a recreation. Many gentlemen get relaxation and amusement with the horse, the gun, or the fishing-rod. Mr. Clute gets it among his bees. And in his case the pleasure brings profit also, for he makes bee-keeping a financial success.

A year ago he began the season with 110 colonies of bees, 80 in his apiary, and 30 in charge of Mr. Ed. Younkin on College Hill. The spring and early summer, last year, were most unfavorable for bees. The weather was cold and the rain was excessive, but by daily feeding he kept his bees rearing large quantities of brood, so that they were very strong in bees. After the middle of June the weather became favorable, and the white clover bloomed in great profusion. The constant rains of spring and early summer had saturated the ground so that the clover remained in bloom a long time. It yielded honey well; and the linden or basswood also yielded well. From these two sources an excellent harvest was secured.

In favorable seasons there is a good flow of honey here from the fall flowers, including asters, golden-rod, figwort, boneset, sunflowers, Spanish-needle, heart's-ease, and some others. In this locality heart's-ease is found in large quantities. Last fall it seemed especially abundant. The frost held off until late, so that the season was long. The clover, the linden, and the fall flowers combined, gave a splendid honey yield. When the season was over, the crop from the 110 colonies was found to be a little over 17,000 pounds, an average of 154 pounds per colony, spring count. In addition to this yield of honey, the stock of bees was nearly doubled.

A part of this excellent success was due to the good management given by Mr. Ed. Younkin to the 30 colonies in his care. From these he obtained more than 6,000 pounds of honey, a little more than 200 pounds per colony. He doubled the stock of bees also. Mr. Younkin had for his share one-half of the honey and one-half of the increase of bees, which gave him a very good return for his summer's work.

Mr. Clute manages his apiary mainly for extracted honey, which he thinks is more profitable in this locality than comb honey. Not nearly so many pounds of comb honey can be obtained per hive, and it is more difficult to store it after taken from the hives, to prepare it for market, and to send it to market in good condition. The extracted honey is simply thrown out of the combs, run from the extractor directly into nice kegs or barrels, bunged up, rolled into the store room, and gives no further trouble. When time for marketing comes, it can be weighed, loaded on a dray, sent to the railroad station, and go thence around the world with no loss for broken combs and mussed honey.

Within a few years the production of extracted honey and the demand for it have assumed large proportions. It can never supersede comb honey, for the latter has excellence and beauty which will always be in demand. But the demand for extracted honey will, in a few years, be immensely greater than it is now. People are learning that it is a delicious, healthful, and cheap article of food, and are beginning to use it in place of the inferior and unhealthy syrups with which the market has of late years been flooded.

Visit to a Scientific Apiary.

The Bloomington *Pantagraph* of the 9th inst., contains the following account of a visit to Mr. H. W. Funk's apiary:

A party of bee-keepers, about 15 in number, left Bloomington about 8:30 a. m. yesterday for a visit to the apiary of H. W. Funk, 9 miles northwest of Bloomington. Arriving about 10 o'clock, they met a cordial reception from Mr. and Mrs. Funk and their two daughters. The apiary consists of about 140 colonies of Italian bees. These are placed on a level plat of ground some 60 or 80 feet square, completely covered with sawdust, and as clean as a house floor. Not a sprig of grass is allowed to grow on the plat. The hives are all painted white and set in straight rows running north and south, each row covered with an awning high enough for a person to stand under it. Mr. Funk opened hive after hive, showing beautiful Italian queens. Some of them he values as high as $20. A visit to his honey-house was the next in order, where the visitors saw some 6,000 or 7,000 pounds of nice honey, mostly comb honey in sections and extracted, in packages of from small sizes to barrels of 550 pounds; also a foundation press, large quantities of wax and every appliance required for an extensive apiary. They then visited the vineyard, about two acres, with a great variety of grapes, the vines looking splendidly, but some of the grapes blighted. Dinner was now announced. And such a dinner! The reporter will not attempt to describe it, but the company will bear him out in saying that there was nothing lacking in the substantials and delicacies of the season. The company then adjourned to the parlor and had a bee-keepers' meeting, at the close of which a committee was appointed to draft resolutions of thanks to the members of the family for their hospitality. But we must not omit the visit to the flower garden, where the guests saw an immense variety of flowers and a great variety of honey-producing plants. The last thing was sampling Mr. Funk's wine, but the reporter not being a good judge in such matters, will not attempt a complete description. The visitors finally bade adieu to the family, with pleasant recollections.

☞ Do not send coins in a letter. It is dangerous and increases the postage unnecessarily. Always send postage stamps, for fractions of a dollar, and, if you can get them—*one-cent* stamps; if not, any denomination of postage stamps will do.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., Aug. 20, 1883.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

Our prices, of late, for extracted honey, have been 7@9c. on arrival, and for choice comb honey 14@16c.

BEESWAX—Has been in fair supply, and sold at 30@32c. for good, on arrival. CHAS. F. MUTH.

NEW YORK.

HONEY—We take pleasure in quoting the following prices on honey, obtainable in our market: Fancy white clover, 1 lb. sections (no glass) 20@21c; fancy white clover, 2 lb. sections (glassed) 18@20c; fair white clover, 1 and 2 lb. sections (glassed) 16@17c.; fancy buckwheat, 1 lb. sections (no glass) 15c.; fancy buckwheat, 2 lb. sections (glassed) 13@14c.; ordinary buckwheat, 1 and 1 lb. sections (glassed) 11@13c.; extracted clover honey in kegs or barrels 9@10c.; extracted buckwheat honey in kegs or barrels 7½@8c.

BEESWAX—Prime yellow beeswax 31@33c.
H. K. & F. B. THURBER & CO.

CHICAGO.

HONEY—There has been a marked increase in sales this week of comb honey. New crop, prime 1 lb. frames (pure white) have sold at 20c. when in fancy cases, in a small way; good many sales at 18c. for some grade 1½ to 2 lb. frames (or prize package) when well-filled and white, 16@17c.; not quite so well filled, 15c.

Extracted is still slow, but late receipts have been riper, and there is more inquiry; 9@10c. for choice clover; dark and buckwheat, 7@8c.

BEESWAX—30@35c. for prime to pure yellow.
R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—A dry North wind in May made our honey crop short in the Southern counties, and ⅓ of a crop is a full estimate for California. Not much arriving, and the small amount coming forward is mostly medium quality. For extra white, either comb or extracted, the market is firm. White to extra white comb 16@20c.; dark to good 10@13½; extracted, choice to extra white 7@9c; dark and candied 6½@—;

BEESWAX—Wholesale 27@28c.
STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—New, in liberal offering, but little sold in quantities—held higher: extracted or strained at 7½@8½c., and comb at 16c. Lots in fancy packages bring more in a small way, while old and inferior sells less.

BEESWAX—Inactive and easy, at 27@28c.
W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY—New honey continues in good demand at 18@19c. for choice 1 lb. sections, and such are readily placed as fast as received; 2 lbs. not so active, at 16@18c. Second quality sells 14@17c. Extracted not in demand.

BEESWAX—None in Market.
A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—We have had a shipment the past week from J. E. Crane, and a good sized shipment from J. V. Caldwell, of Cambridge, Ill., whose honey we had last year.

We quote our market prices, as follows: White clover, one lb. combs 20@22c; white clover, 2 lb. combs 18@20c.; extracted, 9@10c.

BEESWAX—Our supply is gone; we have none to quote.
CROCKER & BLAKE, 57 Chatham Street.

CORRESPONDENCE

For the American Bee Journal.

My Method of Introducing Queens.

G. M. DOOLITTLE.

By referring to page 344, the reader will see how I made my nuclei by placing a frame of hatching brood in a wire cloth cage, so made that it would hang in a hive like a frame. After the cage had been left in the hive 5 or 6 days it was found well filled with young bees, which would always stay when put. Then by placing a queen-cell nearly ready to hatch in the cage at the same time, with the frame of hatching brood, this nucleus would have a queen 4 or 5 days old when the nucleus was formed.

This was as far as I had got at that time, but the next trial proved that I had not yet found out all the good points of my cage. About this time I made a queen nursery according to the description given in Alley's book, and had therein several young queens three days old. By the way, the Alley nursery is the nicest of anything of the kind I ever saw, and is well worth several times the cost of the book to any one who desires to rear from 50 to 100 queens. As soon as your cells are sealed, they can be placed in the nursery, and the queens kept until you wish to use them, by simply placing the nursery in any hive having sufficient bees in it to keep up the desired warmth.

But to return: At this time, as I placed frames of hatching brood in my cages, I let one of those young queens three days old run into the cage. In 6 days the frames and cages were taken out of the hive in which they were placed, and put in hives where I wished my nucleus to stand, by withdrawing the frame from the cage and hanging it in the hive. This was done near sunset, so but few bees would take wing, for I find that if done in the middle of the day, one-half or more of the bees will fly while the frame is being lifted from the cage, they are so anxious to get at liberty. This causes them to take their markings at other places besides the entrance, which makes quite a confusion before they find their way into the hive through the entrance. The next day all these queens went on their bridal trip, and in two days more were laying. Thus I had a laying queen in each nucleus in three days after forming them.

Soon after this I received a choice queen from a distance, which I did not want to lose, so I went and got a frame of hatching brood, put it in one of the cages, turned my queen and her attendants into the cage, hung it in a hive, and left it for five days. Upon getting it at that time, I found the cage well crowded with bees, and the cells, wherever the bees had hatched, were filled with eggs. I now placed a hive where I wanted it to stand, put the frame, bees, and all in it, together with a frame of honey, and drew up the division-board. In three days I gave it another frame of hatching brood, and in a week two more, when I had a colony ready for anything in a short time after. Here at least we have one plan by which any queen can be safely introduced at any time when there is brood in the hive; and the beauty of it is, that the merest novice can do it and know no failure. Repetitions of the above have been equally successful, so I know whereof I affirm.

Borodino, N. Y.

For the American Bee Journal.

Dysentery, its Cause and Cure.

A. L. KEAR.

No satisfactory explanation has been given by any one on the much-discussed question of bee dysentery. Theories are advanced and experiments explode the same, and each year brings with spring the report of great mortality among bees; and yet if we deduce from this and that theory we may learn, we trust soon, the cause and cure of the disease.

In addition to what has been said, I will give my experience, this spring, with dysentery in making up a nucleus in the latter part of May, from which something may be learned on the subject.

Being in a hurry on making up nuclei, to save some valuable queen cells, I put 2 frames of brood, with the usual amount of bees, into a hive from which I had in March taken a queenless colony of bees, which spotted the hive, showing unmistakable signs of dysentery. The combs were all taken out in March, but the usual refuse was left in the hive. I closed the bees in the hive, as usual, in making up nuclei, until dusk, when I opened it and found that the bees had spotted the hive, the same as the bees did in March. The next morning the bodies of the bees were swollen, and the bees were in a stupor. I then proceeded to cleanse the hive, and found the refuse to be very offensive. After the hive was cleaned out, the bees soon commenced to move about more briskly, and a normal condition was soon assumed.

From the above, and numerous other experiments, I am of the opinion that the greatest trouble lies in the refuse on the bottom-board of the hives. We are asked why it is that two hives exactly alike should be differently affected, under the same treatment? It is certainly easily explained; one colony may so cluster that the refuse may fall in a part of the hive that is poorly ventilated, and therefore become very poisonous by the damp accumulation of the same; the other may drop the same in a dry part of the hive, and produce no bad results. And again, any one who will take the trouble to observe, that colonies with pollen in excess, after wintering, will find the refuse having a bad smell, being worse than in case of less pollen, hence the refuse assumes a more offensive form, if it is wet. I am of the opinion that if we could cleanse the bottom-board without disturbing the bees, during the winter, we would not have any cause for dysentery, or so manage the bees that the refuse would be dry, the same result would be attained.

For some years past I have not had dysentery in my apiary, and this spring only in a very limited way, having carried all of my bees through (92 colonies) in sawdust hives, made porous, so as to be as dry as possible and yet warm. I made my hives from plasterer's laths (no patent) and covered the bees over with sawdust. Bees have done but very moderately here, this spring. We had too much rain. It rained 26 days in June; that is, it rained some time in every 24 hours, for 26 days, during the month.

Pana, Ill., Aug. 8, 1883.

For the American Bee Journal.

Many Fertile Workers in a Hive.

B. F. CARROLL.

In reading the questions and answers in the "What and How" department of the Bee Journal, I see some one wants to know why there are such a variety in drones in a colony of a mismated pure Italian queen. I do not remember Mr. Heddon's reply, but I am satisfied I have found out the "why" long since, and I now have a colony of pure Cyprians that have a very fine young queen in it, and there are not less than 100 laying workers in there, too, and had been there a long time before I gave them a queen cell. I have seen 20 or more workers laying as regularly as if they were laying queens, but it takes them a little longer to perform the operation. I have seen them, after laying an egg in a drone cell, try to turn around in the cell, and often they would bend back their wings against their head. Now, what I want to say is this: I have long claimed that any bees (workers) are capable of laying eggs, and I earnestly believe a goodly portion of the drones in all hives are from the eggs of workers. The idea advanced by some that a fertile worker is a bee raised near queen cells, and received a portion of royal jelly cannot be true, for in the above mentioned colony, I believe over 1,000 bees were laying eggs; queen cells started would have 10 and as high as 16 eggs; drone cells would have 3 to 10; worker cells the same. I have watched this colony for an hour at a time, and the bees would lay while I held the comb in my hands, and would pay but little attention to me. I would open the hive several times per day, using no smoker, raise a comb and hold it up before my face and the bees would always be busy laying eggs, attending to the young larvæ, and would seem too busy to notice me. I have seen this before, and have introduced laying queens to these fertile worker colonies, and I am satisfied that the bees would continue to lay drone eggs while the queen would be busy laying worker eggs, and this is why I came to doubt the "Dzierzon drone theory." That is, "a pure queen mismated will produce pure drones;" it may be true, but the colony containing this queen will not have all pure drones, if any.

I wish Mr. Heddon, or some able bee master, could have had this colony to have made observations from, for the benefit of us more illiterate bee-keepers. It seemed from the color of the bees that appeared to do the most of the laying, that they were bees not over three weeks old. I could not find one of those old, shiny, black-tail fellows at the egg business.

Our honey flow that promised us a good thing about the middle of July from the cotton bloom, is over on account of drouth; not a particle of rain have we had since June 12 until to-day, when we had a good rain; the thermometer averages from 96° to 104° in the shade. The cotton plant, and every other green plant, had about *petered* out.

Dresden, Texas, Aug. 6, 1883.

For the American Bee Journal.

A Report for One Year.

W. H. STEWART.

I will now try to give a report of my bee-keeping for one year, beginning May 1, 1882, and ending May 1, 1883. As I have never before given a report in the BEE JOURNAL, it may, perhaps, be proper to preface this one with a mere hint as to the reason why my bees were all very weak in the spring of 1882.

I have always wintered my bees on the summer stands, until the last two winters. In the fall of 1880 I had 85 colonies in first-class condition. In the spring of 1881, I had but 14 left alive. I ran them through the summer for increase, and increased to 45, but they were all quite light and weak when I put them in the cellar. This explains why they were weak in the spring of 1882. As the weather was wet and cold in the spring of 1882, I was compelled to feed them regularly, and give them extra attention up to June 10.

I use a very simple hive, one that I would not like to exchange for any of the so-called standards. It is just a plain box of inch boards; top and bottom both movable; box 17x17 outside, and 13⅜ deep. I use 10 frames 12x12 inside measure; end-bars ⅞x⅞, and 12 inches long (these end-bars admit of strong nailing); top-bars ⅞x¼ inches; bottom bars ½x¼ inches; the bottom bars being narrow, allow dead bees to fall down between the combs without cloying the spaces. The grooves on which I hang the frames are ⅝ deep; this gives ⅜ passage over the frames, both summer and winter. The space between the end bars of the frames and the sides of the hive is ⅝ inches; this allows the handling of such deep frames with perfect ease and without danger of crushing the bees, and I have never found comb built between the frames and the side of the hive. The space between the bottom bars of the frames and the bottom board is ⅝ inches, which gives ample room for dead bees to be carried along on the bottom, towards the entrance, without cloying under the frames.

I use no division boards. I consider them worse than useless. I never give the bees but two combs more than they can cover, and I always chose to keep weak colonies in the back part of the hive. I find that they will build towards the entrance much more readily than they will build back. I hang the frames with the sides towards the entrance. Cold winds do not drive in between the combs as bad as when the ends of the combs are towards the entrance.

My way of feeding is to go after dark and lift off the top board; lift out the empty comb on the back side of the cluster and pour into it thin syrup, or honey thinned up with thin flour starch. I give only enough to last one or two days. I then hang the comb in again, put the cover carefully on, and pass on to the next hive. This work may be done after dark without smoke, as the bees will not leave the combs when they cannot well see to get home again. A lantern may be used if it is not held too near the bees. Robbers are more apt to make trouble if fresh feed is placed on the side of the cluster nearest the entrance of the hive.

I found on June 10, 1882, fresh clover honey in these feed combs, and from that time we had rather a good honey season. We extracted 1,000 pounds of white clover honey up to July 14; then came basswood bloom, and we extracted 2,000 pounds; then we took of buckwheat and other late honey 1,000 pounds; making 4,000 pounds in all.

I use the hives 2 stories high during honey season, and in the last week of August, the upper stories were nearly full of capped honey, and the lower stories were full of brood. I then divided the bees, making two colonies of each one; giving each colony (as near as I could) one-half of the brood that was below, and of the capped honey that was above.

The queenless colony had to rear a new queen, and it only gathered about what they consumed during the balance of the season. I put them in the cellar on Nov. 16, after dark. I do not use the bottom boards of my hives in the cellar. The top boards are made 17x17, the same width of the hive, and do not project over. I nail a cleat on each end to prevent warping. This cleat is 3 inches wide, and sets up edgewise, and is on top of the cover. I lay down some loose boards on the bottom of the cellar, and then lay a top board on the loose boards.

When these top boards are thus arranged all around the cellar, I set the hives on top of them, and then another tier on the top board cleats of this first row, and so build them up 4 or 5 hives deep. You will understand that each hive thus arranged has a bottom ventilation 3 inches deep and 15 inches wide, both front and rear of the hive, which, all counted, makes 90 square inches of bottom ventilation. How is that compared with ½ inch blocks, Mr. Doolittle?

I give not a particle of upward ventilation. No quilts, no chaff, no enameled cloth, or any such flumeries, but just the naked smooth hive board, and it is nicely made to fit close. I calculate for the vapor from the breathing of the bees to condense on the top board and keep a constant supply of water for the bees. I can at any time go into the cellar (and I go about once a week) with a tallow candle (a lamp gives too strong a light) and look under each hive and up among the combs, and see the bees as bright and lively as in summer. I can use a wing, or even my hand, and reach clear across under each hive, and brush off all the dead bees that have fallen from the frames of one hive down on top of the next one below it without making any jar or disturbing the bees in the least.

I kept 85 colonies through this last hard winter in a cellar just large enough to contain them by building them 4 deep on each side, and 5 deep at the back end; and, in the spring, there was not more than 3 quarts of dead bees on the cellar bottom, and no dead bees or mold at all among the combs. All came out of the cellar March 10 (after dark) in first-class condition (except 2 nucleus that starved), and have done splendidly up to the present date.

On May 1, at the expiration of the year for which I am now reporting, the bees were in better condition than in the middle of June, 1882. My bees are Italians, hybrids and blacks, about an equal number of each kind, and I must say that the hybrids are by far the best workers; the blacks the best breeders; the Italians the best to keep out moths, and I think that one kind is just as good on a sting as the other, but I use no veil for either. The only great advantage that I am able to see in keeping the Italians is to get the hybrids.

How sweet this May morning, fruit trees all in bloom,
Prophetic of summer, and a harvest to come,
All nature is crowned with her floral bouquet,
O'er flowing with nectar, this bright morn in May.

But what of the nectar, and what of the bloom?
What of the sheen of the May morning sun?
And what of the spring time; no harvest could come,
Of unfertilized flowers to gladden our home.

Then hie away bees, sweet treasures bring home,
Go, scatter the pollen, o'er petal and bloom,
Go, make sure of the promise of a harvest to come,
O, grand is the lesson we learn in thy hum.

Orion, Wis., May 20. 1883.

Frankford, Pa., Herald.

Robbing—Words of Caution.

JOHN SHALLCROSS.

Young bee-keepers will, in their early experience, be frequently required to call a halt, while they inquire into the nature or remedy for some existing trouble. A few days ago there came a sudden cessation of the honey supply. The dry weather, the hot sun and the advanced season, had deprived the white clover bloom of its nectar-secreting properties. The linden blossoms had yielded to the encroachments of the incipient fruit. The hollyhock and the sun-flower had not yet sent their cards of invitation to the insect world, and the bees, in consequence, lounged idly in front of their hives waiting for something to turn up. Such a condition of affairs is always a season of anxious watchfulness to the apiarist, for

> "Satan finds some mischief still
> For idle hands to do."

And, when he has that kind of an enterprise in contemplation, the bee is an active and pliant instrumentality in his hands. Suddenly, in a certain locality in our neighborhood, the bees were in commotion. Something unusual had taken place. The strong colonies were raiding the weak ones and robbing their stores. Each colony seemed to be testing the courage of the neighboring colony, until every thing was in indiscribable commotion. What could have started this tumult? The cause was soon ascertained.

A young man, utterly ignorant of the first principles of bee-keeping, had witnessed the transfer of a colony a few weeks previous, by an experienced manipulator. He had seen him cut away the superabundant honey and hand it over for family use, while the empty comb and the young brood were carefully fastened in the frames, and placed in the new hive for the use of the bees. The colony soon repaired damages, built additional combs, and the young man, supposing that he knew just how to get the profits out of that hive, proceeded to take the honey by cutting out the well-filled cells, throwing away the brood and empty comb as worthless, and leaving the yard well smeared with the spilled sweets. The bees were left to get back to the hive as best they could, and to prepare, as he supposed, for a similar onslaught a few weeks hence. In place of so doing, they swarmed in disgust, from their ruined home, clustered under the porch of the house, and indulged their stinging propensities with uncomfortable prodigality, until the practical man was sent for who, amid many unorthodox thoughts, subdued and re-hived them. In the mean time, the warm sun had carried the odor of the spilled honey into the air, and attracted the bees from several squares around. There was a grand carnival over this free lunch, and the revelry kept up until the last platter of the feast had been licked clean. The sudden failure of this bonanza left the bees wild with excitement. They were ready for any thing but honest labor, and into mischief they went, by robbing their more helpless neighbors. For a few days the bee-keepers were kept busy in correcting the trouble. Wire screens had to be placed over the entrances to the weak colonies, and the hives moved to other stands. Entrances to still stronger colonies had to be partly closed to enable the bees better to defend their treasures, which they did with good effect. Feeders were brought into requisition for the nuclei and marauders, who lingered late around the wire screens, were thoroughly syringed with cold water. These remedies, actively administered, put a stop to the mischief, until some ignorant or careless fellow shall treat the bees to another unearned feast.

In this, there is a valuable lesson for the beginner. While the fields are yielding their stores of honey, bees will give strict attention to business, but when nothing is to be gathered, they are easily led into temptation. When once they have fairly entered upon a system of thieving, it is almost impossible to control them until many of the weak colonies have been hopelessly ruined. In working about the hives, in the times of scarcity, the young apiarist, and the old ones as well, should be provided with sponge and water to instantly wash up every drop of honey which may be spilled. Pieces of comb should be carefully picked up and carried away, and every thing be kept scrupulously clean. Hives should be opened as little as possible, and only toward evening, when the bees have gathered to their respective hives. Careful watchfulness should be observed to detect the first indications of stealing, and prompt means should be introduced to stop it. Feeding in the open air, in times of scarcity, or, in fact, at any time, is an exceedingly reprehensible practice, as it is sure, sooner or later, to lead to trouble. Remember, that bee-keeping requires the earnest application of well-matured common sense.

For the American Bee Journal.

Successful Honey Production.

J. M. SHUCK.

The main object for which bees are kept is to obtain honey. "Bee-keeping for profit," as that great gardener and florist, Peter Hinderson, would say. Why do we desire a standard frame? Is it so that we may produce more honey? Or, is it that we may produce more bees, and, therefore, more honey? To the trial, bee-keepers; the proof of the pudding is in the eating, not in theories as to whether that pudding is round, square, shallow, deep, tiered-up or stored at the sides.

Honey is the word that sweetens all the rest. Who has it, and who sells it, and who has the profits? Is it a lawyer, a doctor, a clerk, a writer of beautiful books, a teller of delightful stories, a lecturer, an editor, or a plain untitled producer of honey—a bee-keeper?

What hive does he use? What frame is provided to hold the combs for his myriads of workers? How many of these master producers do you know who annually make a large average production of honey? Ask them what frame they use in their bee yards. Do not ask, how they winter the bees, or whether they store at the sides or top, or underneath, but how much honey? Do not ask if he ever wrote a book, or contributes weekly or monthly to the papers, but how much honey? Ask if he is in the business, and has been for years; if he does no other business, and provides well for his family, and do not forget to ask how much honey.

Get the data, figure the result, make your hives, and be happy. We will never see a standard frame. We do not want it; the individuality of the bee-keeper crops out in his work oftener and larger, and he is happier in it, than any one else in any other calling. He would not be happy with a frame like everybody else. He would have it different, and if in no other way he would paint it red. Let him alone.

Des Moines, Iowa, Aug. 9, 1883.

For the American Bee Journal.

Sweet Clover in Danger!!!

M. M. BALDRIDGE.

"A little learning is a dangerous thing." This is exemplified by the following item which recently appeared in a paper of very limited circulation published in this city:

"From all around us come complaints of the sweet clover which fills the highways and makes of itself an *unmitigated nuisance.* In the streets of St. Charles, and out upon the country roads, and in all the waste places, it grows heavy and rank, choking out grass and becoming an unsightly, tangled mass, through which it is almost impossible to push one's way. But for the travel along the roads, even the wagon tracks would be choked full! To be sure *it makes fine food for bees*, but there are plenty of honey-producing sources without it, and it is a mistaken idea to consider it a necessary part of our vegetation. Let the great nuisance be in some way abated."

The above makes a tip-top text for a lengthy and interesting article, but at present I will simply say that sweet clover, inasmuch as it "*makes fine food for bees*," may as well occupy "highways" and "waste places," as the worthless and "unsightly" *mayweed!* One way to abate the "great" and "unmitigated nuisance" would be to kill off the birds that feed upon and scatter the seed! Another way would be to stop the wagons and carrages from traveling the sides of the roads, in muddy weather, thereby picking up the seeds upon their wheels and distributing it for miles along the highway! I might suggest other ways to abate the "great nuisance," but at present the above must suffice.

While attending the Bee-Keepers' Convention in Chicago, last fall, I was under the impression that the legislature of Illinois had passed an act making it a *penal offense* to sow the seed of sweet clover, or to allow the plant to grow upon one's premises; that it was regarded and stigmatized as a noxious and dangerous weed, being classed with castor beans and Canada thistles! Being thus impressed, I thought it my duty to call special attention to the matter to the Convention, whereupon L. H. Scudder and the writer were appointed a committee to examine the special acts of the legislature to ascertain whether that impression was correct or otherwise. After considerable time spent, as directed, the writer is pleased to report that he has not yet been able to find any mention whatever of sweet clover as a noxious or pernicious weed, and imagines that the enemies to this wonderful honey plant would have their hands full to make it appear, upon a proper investigation, that it really belongs to such a bad family. To conclude, it may be well for those interested in the growth and culture of sweet clover to keep a close watch of our legislators, pending their sessions at Springfield, that some one does not slip through an act that may give us more or less trouble in the future, for its enemies are already upon the war-path!

St. Charles, Ill.

For the American Bee Journal.

My Experiments in Wintering Bees.

H. S. HACKMAN.

The weather is once more warm, and the bees are again working on sweet clover, and also some are still at work on white clover. Bees commenced working on white clover on June 5, this season, and until then there was no honey laid up. The season was cool, with the exception of a few hot days; but bees have done well until the latter part of July, when it turned cool again for 10 or 12 days, but it has now become warm and dry, so that the bees are in good humor and gathering honey.

I started with 105 colonies on June 15, 1883; I had but a few natural swarms; I divided a few, and have now about 140 colonies. I have taken from 70 colonies 2,500 pounds of comb honey, and 180 gallons of extracted honey, all white clover. The balance, 35 colonies, have not yet filled their cases. So far, my Holy Lands, Italians and Cyprians are not doing much in storing surplus comb honey; it is the hybrids that are doing the business.

This has been, with me, a very busy season. I never knew that less than 500 colonies could keep me busy, but I found my mistake. I began winter with 230 colonies of bees packed in oak leaves, on their summer stands. Bees are in rows, east and west, 2 feet from centre to centre, and packed on the north side and between only; the south, fronting the sun, are open. The caps were nearly all filled with honey, except the one-story hives, and all were packed to the top, except that the one-story hives were packed over the top and all.

Now for the result: 125 colonies in one-story hives all died but 23 colonies; 105 in two-story hives were all alive but 5, although from the middle of April until the middle of June, I lost 18 more, mostly in two-story hives. What killed my bees in the one-story hives? and what saved them in the two-story hives? My hives are 12 inches deep, and 14x14 inches wide, and long entrance (⅜x4 inches). By two-story, I mean two brood-chambers on top of one another, Where I had two-story, both upper and lower entrances were open all the winter. In most cases the bees were clustered in the upper story; and I imagine the air space for the foul air to settle to, and the two entrances to circulate through and carry off the foul air, is what saved my bees.

The above conditions, as far as packing is concerned, was not always the same in the bees that lived. In at least one-third of the colonies, the surplus racks were left on; some empty, some partly filled, some with a flat cap, and cover the same as the one-story hives; so the upward ventilation was about the same in all cases, single or double story hives.

Much has been said and written on the wintering of bees; and what I have read, and what little experience I have had, I must say I am still lost for want of certainty, hoping, however, that the last winter's experience is worth something to me.

I was much pleased with Mr. Southwick's article on the best style of frame and hive. I think my success in wintering in the two-story hive, coincides with his ideas. Reason teaches us that bees can protect and reach their property and stores much better in a tall than a flat hive of the same capacity.

Peru, Ill., Aug. 12, 1883.

For the American Bee Journal.

Bees Removing Eggs.

DR. A. DREVAR.

DEAR EDITOR:—By the same mail that this will go by I send you an empty queen-cell, from which a very beautiful Italian queen hatched yesterday. My reason for sending it is, that it proves that bees do sometimes remove the egg from one cell to another. The eggs, which it was intended to raise queens from, were taken from a hive containing a beautiful queen which I got from Henry Alley, and placed according to his method in a hive from which all brood and eggs had been removed. Twenty eggs only were given in alternate cells, cut down to ¼ inch in depth. You will perceive by the peculiar broad and deep neck to this cell, that the bees added quite a quantity of wax to the strip of comb before commencing to build the cell proper. The cell is very large, and the queen which emerged from it, is also very large, though not larger than others which I have reared from the same mother.

I keep bees only on a small scale, to supply our own household with a pure sweet, and I believe honey is the only pure sweet which we can now get. The public, as well as the bee-keepers, owe you a debt of gratitude for the stand you have taken against that fearful fraud, glucose, which has already sent many a man to his grave.

Although we are only a very small family (three), we manage to get away with about 500 pounds of honey in the year. We use it three times a day at the table, besides preserving apples, peaches and grapes with it. What we do not want to use, we sell in quart glass cans at 15 cents per pound, and at that price I have found ready sale for all we have to spare.

Another thing I wish to remark: It has often been said in the bee books and journals that it does not pay the small bee-keeper to make his own foundation. There I quite differ, as I think nothing relating to the management of my bees has paid me better than the Pelham foundation mill. The great advantage of owning a mill is to have the foundation fresh, and when one wants it; that is impossible when trusting to dealers.

Our honey season here has been a good one, the yield from locust was immense; the white clover came in before the locust was done, and there are still a few flowers of it. The bees are now working on the Alsike, and I have noticed more bees on the red clover, this year, than ever before.

Annapolis, Md., Aug. 10, 1883.

The queen cell is as described, and the comb foundation good, for that made by plates.—ED.]

Translated from the Bienen Zeitung.

A Queen with Crippled Wings Impregnated.

REV. DR. DZIERZON.

"Is it not a contradiction or a retraction of your opinion, when you formerly made the assertion that a young queen could only be impregnated in the air, and consequently must be able to fly, and now to speak of the possibility of the fertilization of a queen which had left the cell with crippled wings?"

This thought might naturally occur to people, and such a remark be made in reading the heading of this article. In explanation of this apparent contradiction, I will relate to you my experience with a young queen last summer. In one of my queen-breeding boxes, a beautiful and strong Italian queen was hatched, which, on account of one of its left wings being considerably shorter than the corresponding right wing, was unable, in spite of all exertions, to rise up into the air, and immediately fell to the ground in an apparently perpendicular direction. I should not have hesitated to destroy her at once, if I had had another queen or a royal cell at my disposal; but this not being the case, I allowed her to remain in the hive. Two days later I examined the colony again, and tried the queen once more, thinking she might, in the meantime, have gained strength, and perhaps be able to fly; but the result was the same. The queen was, and evidently would remain, incapable of keeping on the wing. It then occurred to me that I might be able to restore the power of the flight to the queen by shortening the longer wing a little, in order to establish symmetry and the equilibrium.

This enabled the queen to keep on the wing for a short time, after which she again fell to the ground. But when I had clipped the wing still more, and made it almost like the other, the queen was able, though evidently with very great exertion, to fly some distance in a horizontal direction until she had reached the hive, in front of which the experiments were made. I allowed her to enter, placing against the hive a shutter reaching to the entrance, and I waited to see what the result would be.

About noon on one of the following days, I noticed some excitement among the bees of a neighboring colony, and when I looked for the cause, I discovered the queen I had operated upon imprisoned by the bees, but fortunately she was unhurt. There can be no doubt she had been for her wedding trip, and on her return had missed the entrance of her own hive again, and a few days after she began to lay eggs, and proved to be normally fertile. Whether she had been impregnated on the occasion referred to, or during a subsequent excursion, it is, of course, impossible for me to say.

Would it not, after this, be possible to restore to a queen hatched with crippled wings, the power of flight by lengthening the shorter wing? Especially where the latter is very short indeed, instead of shortening the longer wing?

A solution of this problem does not appear to me impossible, and I would suggest, that a wing of another queen should be fixed by means of a well-adhereing and quickly-drying glue or cement, to the stump of the crippled wing, which, of course, should not be too short.

The experiment might be worth trying by bee-keepers who are possessed of some very beautiful and strong Italian or Cyprian queens, which are unable to fly. I should be glad if bee-masters who consider themselves capable of performing such delicate operations, would attempt the experiment, and give us their experience, although very problematical, are incomparably greater than the reported impregnation of a young queen in a glass globe, or a cask with a hole at the top.

Kalsmarkt, Germany.

SELECTIONS FROM OUR LETTER BOX

When and How to Feed the Bees.

Extracted honey sells here, for home consumption, at 15 cents per pound, and granulated sugar can be bought for 10 cents per pound, and the Western bee-keepers say that sugar is better to winter bees on than honey. I mean to extract all the honey from the brood-chamber and feed sugar syrup. Which is the best time to extract and feed the sugar? The honey harvest winds up the last week in August, with the exception of some goldenrod and celandine; the latter has a bitter taste, and sometimes sour, which, we think, is bad honey to winter bees on. Would it be the right time to feed up the first week in September? That month here is a mild one, but the nights are cool. About how much sugar to a 7-frame Langstroth hive, full of bees? What is the best way to feed, and how long to do the feeding? Please answer the above questions in the BEE JOURNAL.

HENRY TILLEY.

Castle Hill, Maine, Aug. 4, 1883.

[As soon as the honey harvest is over, you can safely feed sugar syrup for winter stores. In the evening is the best time (except when it is too cold for the bees to be out), so that it will all be taken away by the bees before the next day, for if it be exposed in the day time, robbing will be the result; on account of the absence of honey flora, the bees will eagerly search for any substitute, and become crazy over it. The bees will be better satisfied to have their winter stores capped before cold weather comes. For how to prepare the feed, see page 422.—ED.]

Giant Hyssop and Milk Weed.

I wintered safely 15 colonies and nuclei together in sawdust packing, and lost 3 by spring dwindling. I had 7 effective colonies to extract from at the beginning of the season; altogether 12 run for honey. I obtained 673 lbs. of extracted and about 50 lbs. of comb honey. My largest yield of honey from one colony was 226 lbs., and enough left for wintering. They are hybrids. We have had a remarkably good season, although old fogyism did not get much honey, on account of two much swarming and bad management. I have two honey plants for you to name. No. 1, with pink flower, blooms from the 1st of July, and is still blooming some; bees work well on it, and considerable of it is in our section of country, but, as to quality and quantity of honey, I know nothing. No. 2 is a rare thing here, but bees love to work on it wonderfully well; the time of blooming is about the same as the above specimen. The bloom is about gone.

E. M. COMBS.

Memphis, Ind., Aug. 1, 1883.

[No. 1, is Giant Hyssop (*Lophanthus nepetoides*), one of the Mint family, all of which have nectar of good quality. No. 2, Milk Weed (*Asclepias purpurascens*), allied to the milk weed, which kills bees by the sticky pollen masses.—T. J. BURRILL.]

Short Honey Crop.

The past spring was one of unusual cold, rain and wind, and I do not think that white clover ever promised better, but, after the first week's flow, it gradually slackened up. Mr. Doolittle says that the linden was on its last legs; it had no legs here to get upon. I have not, at this time, one-half as much honey from 32 colonies, spring count, as I had at this date last year from 22 colonies, spring count. We have been suffering badly for the want of rain, but last week we were favored with a beautiful rain, though not half as much as we needed. Should everything be most favorable, our corn crop will only be a partial one, which will be the fourth successive light crop in this vicinity. Our hay crop is good; oats, good, and rye, fair. I doubt if there are 200 acres of wheat in two townships here; what little there was, was good. It is probable that I get more consolation out of a small corn crop than any of my neighbors, as I burn cobs in the smoker, and do not have to split them. Mr. Doolittle gives his method of forming a nuclei; and also tells of some one who has trouble with his. I will, at some future time, give the plan which I have practiced this summer with perfect success.

E. F. CASSELL.

Illinois City, Ill., Aug. 13, 1883.

Wood Sage.

Please give the name of the enclosed bloom and leaf, and state its merits as a honey plant. I never noticed it here until this season; there are lots of it in the low lands. It commenced to bloom July 10, and is 4 feet high. The bees pay strict attention to it all day long.

Kane, Ill. R. M. OSBORN.

[American Germander, or Wood Sage (*Teucrium Canadense*). This is a very common plant in low, wet grounds, occurring throughout the Northern portions of the United States. It is another member of the Mint family, and, like its relatives, produces an abundance of excellent honey.—T. J. BURRILL.]

Legion of Queens in a Hive.

I see by the BEE JOURNAL of July 25, that Mr. Shirley found two queens in one hive. I am 13 on my slate. I have practiced returning the most of my swarms after the first issue, but before doing so I would "go through" the hive and remove all of the queen-cells in this hive. I took out 12 nice yellow queens, and left one to manage the affairs of the family. Can any one of the bee fraternity tell the cause of such a freak of bee nature? What does Mr. Heddon think?

H. B. HAMMON.

Bristolville, Ohio, Aug. 1, 1883.

A Bug—Water Boatman.

I send you a bug; please report its name. W. THOUGHTEN.

Martinsville, Ill.

[The large bug is called by entomologists *Belastoma grandis*, and sometimes is known by the common name of "water boatman." It lives in the water, feeding on living prey, but also flies through the air in search of other streams, ponds, etc., or to find company. It has a stout, sharp beak, capable of inflicting severe wounds.—T. J. BURRILL.]

My Experience with Sweet Clover.

I sowed it with Alsike and mammoth clover; they all bloomed this season; in the same range is timothy and blue grass. Calves, hogs and sheep (my stock rams) were allowed to run on it, and the hogs were fed. The mammoth and Alsike were eaten down close to the ground, while the sweet clover is from 4 to 6 feet high; nothing eating it. In case of the advise given to Mr. F. M. Cheney, to feed it down with pigs, it might be a benefit to bees, but it would be death to pigs. My stock eat rag and hog weeds in preference. I shall not sow any more of it, and will destroy what I have, if I can. I regard it as a weed useless only for bees, and a positive damage to the farmer and stock grower. J. A. JOHNSTON.

Green Hill, Ind., Aug. 11, 1883.

[Your experience is very different to hundreds of others, who give the very opposite, as their experience. But we give all sides to every question, and all may strike a balance for themselves.—ED.]

Bees on a Strike.

Since the 27th day of last month the bees through this section have been on a strike, so to speak, when white clover gave out. It has been so very dry that other flowers have failed to yield nectar. Melilot clover is doing but little, and smartweed is, this year, a failure. Buckwheat is but little sown, so we may calculate but a small yield of honey for the balance of the season. Our corn, for this season, will scarcely produce half a crop, and fruit of all kinds is almost an entire failure. H. W. WIXOM.

Mendota, Ill., Aug. 14, 1883.

That Glucose Slander on Bee Men.

It is but justice to the bee men of the world, that I add my testimony to that of Mr. Wm. Muth-Rasmussen, of California (page 377), against the foul slander upon the bee men of California, "that they feed glucose very largely, and make money out of it." Such a statement has not a particle of truth to back it. I spent six years in California, and did nothing else but care for bees and produce honey. In that time I have seen both sides of the bee business; I have seen the time when honey flowed as it flows in no other country; then I have seen many more seasons when there was scarcely any honey, and we had to feed the bees to keep them from starving, but we did not feed glucose; we did the same as Mr. Rasmussen; bought honey at a much larger figure than we had sold it for, and fed it to the bees. Such a base fabrication has its origin in the corrupt brain of the glucose manufacturer, and has no other foundation for truth than the satisfying of an unprincipled desire to steal the good name that pure honey has gained, by palming off their foul stuff upon the inexperienced; thereby making money for themselves, but aiming a *deadly* blow at the honest and hard-working honey-producer. Mr. Editor, "tire not" in the good work you are engaged; in nor give the enemy any quarter until the popular verdict of an outraged people shall place the *heel of disapprobation* upon the head of this venemous reptile, *glucose.* A. W. OSBURN.

Water Valley, N. Y., Aug. 3, 1883.

Little Increase and Surplus.

My bees (41 colonies) have not boomed any yet. I have had but little increase and very little surplus. I am out of the reach of basswood, and cannot make the seed grow. Sweet clover has also twice failed to grow for me, but I shall try again. M. E. DARBY.

Dexter, Iowa, Aug. 13, 1883.

Honey Crop of New York.

Do not condemn the New York honey crop until you hear from more of us. The weather has been rather too wet, but bees here have done pretty well between showers. After rather a moderate yield from clover, basswood came in bloom, on July 19, and was very sweet for 18 days. From 40 weak colonies I have taken 3,000 pounds of very choice capped honey, with the extractor. Although I use a frame 11x13, I think Mr. Demaree is ahead in the frame argument. W. H. S. GROUT.

Kennedy, N. Y., Aug., 13, 1883.

No Honey.

The honey season here has been the poorest I have ever known. No honey wave or honey shower came this way. Honey dew has made its appearance again this season in abundance. H. R. BOARDMAN.

East Townsend, O., Aug. 13, 1883.

What the Bees Gathered in 30 Days.

The following is what an average colony of bees gathered from white clover, by weight, without swarming, on full frames of wired foundation, in 30 days: June 15, 1 lb.; 16, 2 lbs.; 17, 4 lbs.; 18, 5 lbs.; 19, nothing; 20, 3 lbs.; 21, 2 lbs.; 22, 3 lbs.; 23, 1 lb.; 24, 1 lb.; 25, nothing; 26, nothing; 27, 1 lb.; 28, 8 lbs.; 29, 9 lbs.; 30, 5 lbs.; July 1, 6 lbs.; 2, 3 lbs.; 3, 1 lb.; 4, 2 lbs.; 5, 5 lbs.; 6, 3 lbs.; 7, nothing; 8, 4 lbs.; 9, 10 lbs.; 10, 1 lb.; 11, 4 lbs.; 12, 3 lbs.; 13, 1 lb.; 14, nothing; 15, 1 lb.; total, 84 lbs. The above shows that not every day do the bees gather honey. In the heighth of the season, I only took on an average of 25 pounds from 40 colonies, to date, mostly in 1¾ inch sections, or 7 to the foot. I use the Heddon case, and my honey is built in as good shape as when I used wide frames and tin separators, and I can empty a case of 28 sections in less time than it required to take out the 8 sections in one wide frame. I would almost as soon think of going back from a movable frame hive to the old box hive, as to go back from a case to wide frames and separators; they are relics of the past. J. J. HURLBERT.

Lyndon, Ill., Aug. 5, 1883.

Horse Mint.

Enclosed I send a specimen of a plant that grows on old, worn-out, sandy land, and blooms in July. It yields considerable honey of fine quality. What is it? F. WILCOX.

Mauston, Wis., Aug. 3, 1883.

[Horse Mint (*Monarda Bradburiana*). There are three other species of Horse Mint, all of which are good honey plants.—T. J. BURRILL.]

Vervain, Red Clover, etc.

Bees are doing well here this summer. There has been no honey drouth here at all. The fall flowers are coming in. Our bees are working very strongly on a plant which I have never seen mentioned in any publication I have ever read. This is the blue vervain (or vervine). I never saw them work on any thing any stronger, unless it is basswood. It seems to rival the spider plant, for they work on it all day, and I have seen a dozen on a single plant, and as quick as one bee leaves, another comes, and thus they keep at it all day. It grows in rich, moist land (not wet), along the creek bottoms. There are about 4 acres in this patch, and there are millions of bees on it. I would like to know if this has been recognized before as a honey plant? Will Italian bees gather honey from red clover? Or, will any strain of Italians or hybrids gather enough to depend on it for a crop of surplus honey? If any of them will do this, they will be the "coming bee" for this section, regardless of all else, for from June until September there is plenty of red clover. AN AMATEUR.

Wayne Co., Ind., Aug. 14, 1883.

[Vervain has often been mentioned as an excellent honey producer. See pages 537, 540, and 569 of the BEE JOURNAL for last year. Occasionally bees gather honey from the red clover, but it cannot be "depended upon for a crop of surplus honey"—not by any means.—ED.]

Local Convention Directory.

1883. *Time and Place of Meeting.*

Aug. 29.—S. W. Iowa, at Red Oak, Iowa.
R. C. Aikin, Sec.

Aug 29.—Iowa Central, at Winterset Fair Grounds.
Z. G. Cooley, Sec. *Pro tem.*

Aug. 29, 30.—Ky. State, at Louisville, Ky.
Dr. N. P. Allen, Sec., Smith's Grove, Ky.

Sept. 4.—N. W. Ill., & S. W. Wis., at Ridot, Ill.
Jonathan Stewart, Sec.

Sept. 12-14.—Tri-State, at Toledo, Ohio.
Dr. A. B. Mason, Sec., Wagon Works, O.

Sept. 18-20.—North American, at Toronto, Ont.
A. I. Root, Sec., Medina, O.

Oct. 9, 10.—Northern Mich. at Sheridan, Mich.
O. R. Goodno, Sec., Carson City, Mich.

Oct. 17, 18.—Northwestern, at Chicago, Ill.
Thomas G. Newman, Sec.

Oct.—Northern Ohio, at Norwalk, O.
S. F. Newman, Sec.

Dec. 5-6, Michigan State, at Flint.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Feeding, Winter Passages, etc.

Please answer the following questions in the BEE JOURNAL:

1. With Italian bees is it necessary to feed at the close of the honey season to keep up brood-rearing?

2. How do you prepare winter food from sugar?

3. Do you make winter passages through the comb?

4. Do your bees, after swarming, fill the brood-chamber so that you have to extract to give the new queen room; or do you cut the queen-cells and introduce a new laying queen as soon as they swarm? Is not the latter the best method?

5. Do your hives front the south in winter as in summer?

6. Is it necessary to have a bottom ventilation? F. M. CHENEY.

South Sutton, N. H.

ANSWERS.—1. No; nor with any other bees in this locality. Late breeding is not valued by me as by some.

2. By boiling 10 pounds of sugar with 3 or 4 pounds of water (according to how warm the weather is when I feed), and adding one teaspoonful of cream of tartar, dissolved in water.

3. No, never; but over them with a bow.

4. After swarming the bees store more in the brood combs (as the pupæ hatches out) than before, but as soon as the new queen begins to lay this honey will go into more bees, and the boxes above at a great rate. *No, sir*, I do not extract to give the queens room, nor cut queen-cells. I have learned better, and that, with proper fixtures and management, there is no necessity for so doing.

5. My hives front the east all the year around.

6. Only at the entrance, so far as I know.

Uniting Colonies.

I would like some information from Mr. Heddon. I have about 50 colonies of bees, and do not care about keeping so many, and as the country here is pretty well supplied, I could not get over $5 or $6, and as they are all in new Langstroth hives, and have ten frames of comb, I think I might make more by doubling them up, putting two colonies together and extracting from one. Our fall flowers are just beginning to bloom, and in a few days I expect my bees to be hard at work. When will be the best time for doubling them up? At present they are full of brood. Do you think it best to do it before they commence to work on the fall crop, or after it has been harvested? Bees have not made any surplus here since the first part of June. We had a honey flow only about three weeks, which was very good, while it lasted, for those who were prepared for it.

A NOVICE.

Posey Co., Ind., Aug. 6, 1883.

ANSWER.—If you can get five or six dollars per colony for your bees in the fall, after the honey harvest is over, my advice would be run them as they are, getting all the surplus you can from your 50 colonies, and then sell one-half. If you want 25 colonies next spring, had you not better keep the whole fifty, for fear part might die? Then if they should, you would have your new Langstroth hives, combs, etc., without making or buying these supplies for the coming year.

I would much object to doubling them up for winter, after your fall harvest; for such colonies are more apt to have dysentery where there is no chance for them to void. Such doubling acts are a great auxilliary to the cause of dysentery in my apiary. But to double them before the fall harvest, is not so bad an idea. In case of such uniting, you can destroy all your poorest, and keep all your best queens. I would do the doubling and uniting at the commencement of the honey flow, not before, as Mr. Langstroth has told us all these operations with bees, work more successfully during a honey flow, than during a dearth.

Kentucky Bee and Honey Show.

The Kentucky State Bee-Keepers' Association will hold its annual meeting in Louisville, Ky., Aug. 29 and 30, at the Southern Exposition building. We hope to have a large attendance of the bee-keepers of the State, and also of other States, both North and South, as the convention will be in session during the week of the Honey and Bee Exhibit. And premiums amounting to $60 are offered by the commissioners of agriculture of Kentucky, for Kentucky honey, and $40 by the Exposition, for the finest Italian bees in Observatory hives. The premium on bees is open to the world, and we hope to see a fine display.

The Bee-Keepers' Convention and Honey and Bee Show will be held in the same week of the great exhibition of fruit, for which over $2,000 in cash premiums will be paid.

We extend a cordial invitation to all bee-keepers' societies, to editors of bee publications, to honey-producers, and queen breeders, and all who are interested in apiculture, to be with us. We hope to have the father of modern bee-keeping with us, the Rev. L. L. Langstroth, to whom a cordial invitation has been given.

Reduced fair on all railroads, both North and South, will be offered to all who attend the Great Southern Exposition. It will doubtless be the grandest exposition ever held in the United States, in magnitude, and nearly equal to the Centennial.

N. P. ALLEN, *Sec.*

Notice to Iowa Bee-Keepers.

Quite a large number of bee-keepers in our State have expressed a desire for the formation of a State Association. A consultation with others has resulted in the decision not to attempt to hold a meeting during the coming State Fair, but if thought best to hold one during the time of the meeting of the State Agricultural Society at Des Moines next January. All bee-keepers who may be present at the Fair are earnestly requested to report to the Rev. O. Clute, at the Apiarian Exhibit, on or before 1 p. m. of Tuesday, the 4th day of September, 1883, who will give them notice of a meeting for consultation, and also for the selection of a committee of arrangements if one is deemed necessary.

O. O. POPPLETON,
Vice-Pres. N. A. B. K. Society.
Williamstown, Iowa, Aug. 10, 1883.

Nebraska Bee and Honey Show.

I desire to call the attention of the members of the Nebraska State Bee-Keepers' Association, and all others engaged in apiculture, to the liberal premiums offered by the Nebraska State Agricultural Society in Class VII., entitled "Bees, honey and apiarian goods," and especially the premium of $25 offered for the best colony of bees. The test of colonies will be net gain, and will be weighed and sealed Aug. 28, and weighed again Sept. 11. Each colony must be the progeny of the queen and colony on trial. All shipments in this department can be made to the Hon. B. E. B. Kennedy, superintendent of Class VII.; and the bees should be on the ground on or before Aug. 27. All other articles may be entered, up to noon of Sept. 10.

M. L. TRESTER,
Sec. N. B. K. Association.
Greenwood, Neb.

☞ The Northwestern Illinois, and Southwestern Wisconsin Bee-Keepers' Association, will hold its next meeting on Sept. 4, 1883, at John Swanzey's, 2 miles South of Ridot, Stephenson County, Ill. There will be facilities to take persons from the station to Mr. Swanzey's.

JONATHAN STEWART, *Sec.*

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

How to Create a Market for Honey.

We have now published another edition of the pamphlet on "Honey as Food and Medicine," with more *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy **5** cents, postpaid; per dozen, **40** cents; per hundred, **$2.50**. 500 will be sent postpaid for **$10.00**, or 1,000 for **$15.00**. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit. Try it, and you will be surprised.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1 year, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with $6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For four subscribers, with $8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with $10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

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☞ May we ask you, dear reader, to speak a good word for the BEE JOURNAL to neighbors who keep bees, and send on *at least one new* subscription with your own? Our premium, "Bees and Honey," in cloth, for one *new* subscriber to the Weekly, or two for the Monthly, besides your own subscription to either edition, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN,

Editor of the Weekly Bee Journal.

925 West Madison Street, Chicago, Ill.

Mrs. J. F. Upton gives the following notice of this book in the Bath, Maine, *Sentinel*:

A guide to the management of the apiary for profit and pleasure, by Thomas G. Newman. This work is designed to initiate beginners in bee-keeping in all the secrets of successful bee-culture. Beginning with the different races of bees, the author takes his readers along step by step, carefully explaining the different kinds of bees, illustrating each kind with the eggs and brood, explaining the terms used, the production of wax and comb, and the work done by these wonderful insects. The establishment of an apiary is next considered; the best location, time to commence, how many colonies to begin with, what kind of bees to get, how to care for a first colony, keeping bees on shares, changing the location, all of which it is indispensable for a beginner to know. It is also important to know which kind of hive is the best, how to procure the best comb honey, how to procure it for market, how it should be marketed, what to do with candied comb honey, and how to extract honey. The scientific management of an apiary is then entered into, and illustrations of all the necessary applicances introduced. There is a chapter devoted to the honey extractor and its use, and another to comb foundation and its use. The various honey-producing plants and trees are named and illustrated. Various methods for exhibiting bees and honey at county and state fairs are described. The best and safest plans for wintering bees are discussed, the book closing with some general advice to beginners. The author says of his book on Bees and Honey, "it was not designed to supersede or supplant any of the valuable works on apiculture already published, but to supply a want for a cheap work for the beginners." We most cordially recommend this work not only to beginners, who will find it invaluable, but to all who are not already familiar with the lives and movements of these industrious and intelligent little workers. The information to be gained as to their habits, manner of breeding, intelligence, energy and wonderful instincts, by reading this book alone, is enough to make one regard the bee with admiration and amazement.

PRICE—Bound in cloth, **75 cents**; in paper covers, **50 cents**, postpaid.

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Bingham Smoker Corner.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent post-paid for **$1.75.** Address,

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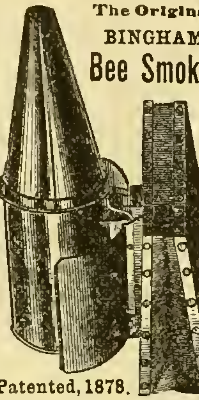

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BINGHAM
Bee Smoker

Patented, 1878.

CYPRIANS CONQUERED. — All summer long it has been "which and tother" with me and the Cyprian colony of bees I have – but at last I am "boss." Bingham's "Conqueror Smoker" did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham.
G. M. DOOLITTLE.
Borodino, N. Y.,
Aug. 15, 1882.

EXCELLING ALL.—Messrs. Bingham & Hetherington, Dear Sirs:—I am now selling your Smokers almost exclusively. You are excelling yourselves in smokers all the time.
Respectfully,
J. G. TAYLOR,
Austin, Texas, May 10, 1883.

THE VERY BEST.—The Bingham "Conqueror" Smoker is the very best thing I have tried in that line.
M. M. LINDSAY.
Fulton, Tenn., July 24, 1883.

◆

During the following three months, Bingham Smokers will be sent post-paid, per mail, on receipt of the following prices:

The "Doctor"..	(wide shield)—3½ in. fire tube,		$2.00
The Conqueror	(wide shield)—3 in. fire tube,		1.75
Large	(wide shield)—2½ in. fire tube,		1.50
Extra	(wide shield)—2 in. fire tube,		1.25
Plain..........	(nar. shield)—2 in. fire tube,		1.00
Little Wonder..	(nar. shield)—1¾ in. fire tube,		.65
Bingham & Hetherington Uncapping Knife..			1.15

With thanks for letters of encouragement, and the absence of complaining ones, we tender to our thirty-five thousand patrons our best wishes.
Very Respectfully Yours,
BINGHAM & HETHERINGTON.
Abronia, Mich., June 1, 1883.

☞ The pamphlet "Honey, as Food and Medicine" is an excellent thing to give away at Fairs, where a good exhibit is made. A thousand copies will sell almost a fabulous quantity of honey, if judiciously given—say *given to every one who buys a package of honey*. Try it.

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

◆

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Special Notice.—We will, hereafter, supply the Weekly BEE JOURNAL for one year, and the seventh edition of Prof. Cook's Manual of the Apiary, bound in fine cloth, for **$2.75**, or the Monthly Bee Journal, and the Manual in cloth for $1.75. As this offer will soon be withdrawn, those who desire it should send for the book *at once*.

◆

☞ The pamphlet, "Honey, as Food and Medicine," is in such demand, that we find it necessary to print them in still larger quantities, and can, therefore, still further reduce the price, as noted on page 285. Let them be scattered like "autumn leaves," and the result, we feel sure, will fully reward honey-producers for both the labor and the small expense.

◆

☞ Do not let your numbers of the BEE JOURNAL for 1883 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

◆

☞ The new Postal Note will be obtainable in a few days at the Postoffices all over the country. Then any sum from one cent to five dollars can be sent in a letter, by obtaining a Postal Note, costing only 3 cents. After October 1, small sums can be easily sent to this office for 5 cents (3 cents for the Postal Note and 2 cents postage on the letter), and there will be no need of sending postage stamps in letters, which often get all stuck together by the damp weather, or being handled while perspiring.

◆

The Waverley Novels.—T. B. Peterson & Brothers, 306 Chesnut Street, Philadelphia, Pa., have just commenced the publication of a new and cheap edition of "The Waverley Novels," by Sir Walter Scott, which will be completed in Twenty-six Weekly Volumes, each volume being a novel complete in itself, and one volume will be issued every Saturday until the whole are published. Each book will make a large octavo volume, have on it an Illustrated Cover, and will be sold at the low price of Fifteen Cents a volume, or Three Dollars will pay for the full and complete set of Twenty-six volumes.

40 TONS

Of COMB HONEY wanted ; York State preferred. Say how much of each grade you will probably have, size of section, how soon it can be in shipping order (the whole or part of it), lowest cash price, and address F. I. SAGE, Wethersfield, Conn.

BEES Send to Chicago, Ill., for sample of
AMERICAN BEE JOURNAL
Monthly, **$1** a year. Weekly, **$2.**

The Bee-Keeper's Guide;

OR,

MANUAL OF THE APIARY,

By A. J. COOK,

Of Lansing, Professor of Entomology in the
State Agricultural College of Michigan.

—:o:—

320 Pages ; 133 Fine Illustrations.

—:o:—

This is a new edition of Prof. Cook's Manual of the Apiary, enlarged and elegantly illustrated. The first edition of 3,000 copies was exhausted in about 18 mouths—a sale unprecedented in the annals of bee-culture. This new work has been produced with great care, patient study and persistent research. It comprises a full delineation of the anatomy and physiology of the honey bee, illustrated with many costly wood engravings—the products of the Honey Bee ; the races of bees; full descriptions of honey-producing plants, trees, shrubs, etc., splendidly illustrated—and last, though not least, detailed instructions for the various manipulations necessary in the apiary.

This work is a masterly production, and one that no bee-keeper, however limited his means, can afford to do without. It is fully "up with the times" on every conceivable subject that can interest the apiarist. It is not only instructive, but intensely interesting and thoroughly practical.

—:o:—

Read the following opinions of the Book;

All agree that it is the work of a master and of real value.—*L'Apiculture*, Paris.

I think Cook's Manual is the best of our American works.—LEWIS T. COLBY.

It appears to have cut the ground from under future book-makers.—*British Bee Journal.*

Prof. Cook's valuable Manual has been my constant guide in my operations and successful management of the apiary.—J. P. WEST.

I have derived more practical knowledge from Prof. Cook's New Manual of the Apiary than from any other book.—E. H. WYNKOOP.

This book is just what everyone interested in bees ought to have, and which, no one who obtains it, will ever regret having purchased.—*Mich. Far.*

To all who wish to engage in bee-culture, a manual is a necessity. Prof. Cook's Manual is an exhaustive work.—*Herald*, Monticello, Ill.

With Cook's Manual I am more than pleased. It is fully up with the times in every particular. The richest reward awaits its author.—A. E. WENZEL.

My success has been so great as to almost astonish myself, and much of it is due to the clear, disinterested information contained in Cook's Manual.—WM. VAN ANTWERP, M. D

It is the latest book on the bee, and treats of both the bee and hives, with their implements. It is of value to all bee-raisers.—*Ky. Live Stock Record.*

It is a credit to the author as well the publisher. I have never yet met with a work, either French or foreign, which I like so much.—L'ABBE DU BOIS, editor of the *Bulletin D' Apiculteur*, France.

It not only gives the natural history of these industrious insects, but also a thorough, practical, and clearly expressed series of directions for their management; also a botanical description of honey producing plants, and an extended account of the enemies of bees.—*Democrat*, Pulaski, N. Y.

We have perused with great pleasure this *vade mecum* of the bee-keeper. It is replete with the best information on everything belonging to apiculture. To all taking an interest in this subject, we say, obtain this valuable work, read it carefully and practice as advised.—*Agriculturist*, Quebec.

This book is pronounced by the press and leading bee-men to be the most complete and practical treatise on bee-culture in Europe or America ; a scientific work on modern bee management that every experienced bee-man will welcome, and it is essential to every amateur in bee-culture. It is handsomely printed, neatly bound, and is a credit to the West.—*Western Agriculturist.*

This work is undoubtedly the most complete manual for the instruction of bee-keepers which has ever been published. It gives a full explanation regarding the care and management of the apiary. There is no subject relating to the culture of bees left untouched, and in the compilation of the work Prof. Cook has had the advantage of all the previous knowlede of apiarists, which he uses admirably to promote and make popular this most interesting of all occupations.—*American Inventor.*

—:o:—

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THOMAS G. NEWMAN,
West Madison Street, CHICAGO, ILL.

OLDEST BEE PAPER IN AMERICA
THE AMERICAN
BEE JOURNAL
ESTABLISHED IN 1861

VOL. XIX. CHICAGO, ILL., AUGUST 29, 1883. No. 35.

THE AMERICAN BEE JOURNAL
Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR,

Creating Local Markets for Honey.

The California *Grocer* makes some comments on the suggestions we made sometime ago about scattering information about the uses of honey, and its value both as food and medicine, and while thoroughly endorsing the plan, it remarks as follows:

> If it be acknowledged that an adoption of this means will be at all effective, why not make it generally so? If the suggestion of the BEE JOURNAL is worthy of adoption at all, it is worthy of being adopted to the fullest extent, as it is one of those propositions the remunerative quality of which is in exact ratio with the amount of energy and enterprise expended upon it. The information, published in an economical form, should accompany every sale, whether to wholesaler or retailer, in order that when the goods reach the consumer's market, the retailer might be enabled to send this information broadcast among his patrons to induce the purchase of this delicious household luxury.

☞ The Indiana State Fair commences Sept. 24, and promises to excel all former ones. Bee-keepers should see to it that there is a large display of honey, both comb and extracted.

☞ Mr. W. F. Clarke, Guelph, Ont., will attend the North American Bee-Keepers' Convention at Toronto, next month, and represent the BEE JOURNAL as well as make a report of the proceedings.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey* at Fairs, will sell almost a fabulous quantity of it.

Caledonian Apiarian Society.

Mr. John D. Hutchinson, of Glasgow, Scotland, has sent us a short report of the Bee and Honey Show of Scotland, from which we extract as follows:

> The tenth show of this society was held in a tent inside the showyard of the Highland Society. For various reasons it was not expected that the show would be a large one. The weather had been very much against the bees. Nearly all the exhibitors are from the southern portion of the country, and the existence of the society was only made known to some north-country persons yesterday, when they were told that bees were actually being shown. As a whole, the show, though small, was worth a visit. Among the most successful of the competitors is Mr. Angus Cameron, of Blair Athole, the winner of the Queen's Prize at the Wimbledon Rifle meetings in 1866 and 1869.
>
> Considering the difficulties we have had to contend with this year, our show has been very successful both financially and otherwise. The bee-keepers are now getting their colonies removed to the "Heather," so with good weather (such as we have at present), I have no doubt but that we shall have a good harvest of heather honey. There has been little or no honey as yet, owing to the bad weather we have had. Everything connected with bee-keeping has been very quiet for sometime past.

Preserve the Wax.

Mrs. L. Harrison gives the following advice in the *Prairie Farmer:*

> All hives containing honey, in which bees have died, should be fastened up securely so that no bees can enter, for if they are permitted to carry it off as soon as it is all gone they will try the strength of all weak colonies and many will be destroyed. We prefer to brush off the bees from combs and store them in a room, instead of fastening them in hives where they have no ventilation, as they become damp and moldy, and the pollen sours. We put our combs into clean hives and pile them one upon another in the honey house, where they are secure from bees, and will remain dry. It is not necessary to pick out dead bees from combs for, the bees will do it, and work cheaper than we can if one comb at a time is given to a strong colony. Comb is a bee-keeper's stock in trade; better than money in the bank; and should be preserved, for while bees are building a pound of it they will store 20 pounds of honey. All bits of refuse comb should be made into wax, as it is very scarce at present, brings a good price, and is in demand for foundation.

Bee Tent for Fall Work.

The *American Agriculturist* remarks thus about the use of a bee tent for manipulating bees in the fall:

> As is well known, bees become irritable if handled after gathering ceases in the autumn. To take out extra combs, extract the uncapped honey, and prepare for winter as directed above, is often the most dreaded work of the season. The bees seem cross at the failure to obtain labor, and cannot endure disturbance. By using a bee tent, made of wire gauze or mosquito netting, and large enough to set over the hive and operator, all this danger and trouble is avoided. The bees are apparently frightened into good behavior, and are as amiable as though in the midst of the honey harvest. The bee tent also prevents robbing, which is quite likely to be induced if we work with the bees when they are irritable from enforced idleness.

☞ The Keithsburg, Ill., *News* is growing eloquent over the fact that the grape sugar refineries are gathering up old bones, rags, etc., to make its villainous stuff from. It says:

> Smith's team has been hauling bones from the slaughter houses and putting them in cars for a Burlington market. These bones are used in the sugar refinery. Just think! bones in your sugar! the nasty, stinking bones. Honey, fresh from the "blessed bees" is the only pure sweet.
>
> The bees are now working on the sand mint. They have pretty much left the corn tassels. The sand mint will last till fall, and makes most excellent honey. Thank goodness there is plenty of sand mint here in the bottom. More than can be utilized by the numerous colonies kept by our several apiarists.

Apis Mellifica in Java and Ceylon.

The following article concerning the bees taken to Ceylon and the island of Java, by Mr. Frank Benton, was written for the *Bienenzeitung*, by Mr. A. Schroder, of Trieste, Austria, and translated by Mr. A. Neighbour, of London, England, for the *Journal of Horticulture*, and it will be read with interest by the bee-keepers of America:

"The gentleman in charge of the Imperial German Consulate of Batavia, who has for years past been kind enough to keep me informed of all that takes place in the island of Java as regards bee-keeping, sent me recently a cutting from a native paper which contains some notices of the bees introduced into Java by my friend Mr. F. Benton. Thinking that any information on the acclimatization of bees in Java may be of interest so far as the history of bee-keeping is concerned, I have translated the article referred to, of which the following is an extract:

"An American bee-keeper, Mr. F. Benton, who visited Java in order to study Apis dorsata, and, if possible, to introduce this bee into Cyprus, and thence into Europe and America, brought 9 colonies of bees with him, 7 being from Cyprus and 2 from Palestine. New hives were procured in order to try once more to acclimatize bees in Java after the first attempt to introduce the European bee, which was made in 1878, had proved a failure. The trial was made at Tjikeumeuh under the direction of Mr. Messink.

"The bees were placed in the Botanical Gardens under the superintendence of Mr. Benton, who looked after them personally for 25 days. When he left, 4 queens had commenced to lay eggs, and the other colonies, including their queens, were in tolerably good condition considering the long voyage they had made. During the first fortnight after their arrival the bees were fed with sugar dissolved in water. After this time the workers from four hives began to fly out and returned laden with honey. The queens continued depositing eggs for about the three months after their arrival in Java. After that, egg laying diminished, and at last the bees quite ceased to leave the hive.

"The number of worker bees became smaller and smaller, and finally some of the colonies dwindled down so much that only the queen and a few worker bees were left. With a great deal of trouble one colony was kept alive till the end of the year. But when the western monsoon set in in 1881, the population of this colony also dwindled away, and the workers flew out no longer, probably on account of the dampness of the atmosphere.

"It is to be regretted that the second attempt to acclimatize the bee in Java has also turned out a failure, in spite of all the precautions that had been taken to make the experiment a success. The loss of all the colonies was probably caused by the worker bees not finding sufficient food during the hot season, the consequence being that the queens did not receive the proper amount of food, and, therefore, discontinued laying eggs.

"The experiment to domesticate the East Indian bee (Njiroean) has given a better result than a previous attempt in 1877 and 1878. For the last eight months there have been two colonies of these bees in Tjikeumeuh with very large populations. The bees fly out and collect a great deal of honey. Eggs are deposited regularly, and without interruption. The honey of this bee is generally considered inferior in flavor, while the wax is said to be of excellent quality.

"A swarm given off by one of the colonies a short time ago has been secured, but it was no easy task. In Europe a swarm generally settles on a branch of a tree near the apiary, from which it is easy to remove the bees; but the Indian bees fly high up into the air, and do not settle till some time after.*"

Mr. Benton's attempt to acclimatize Apis mellifica in Java has unfortunately proved a failure, and I fear there is but little prospect of this bee becoming domesticated there, although I consider it quite possible if the bees, after their arrival in Java, are made to rear young queens, because the vitality of the imported queens becomes impaired during the long voyage. It would be necessary in that case to increase the population of the colonies and their stores quickly by feeding.

In Ceylon the bees that were imported by Mr. Benton have been more successful than those in Batavia. During the rainy season from May till September, the colonies were supplied with food, but in the remaining months of the year the bees collected sufficient honey from the flowering palm trees and other tropical plants for their own wants, and had even some to spare for their master. One colony swarmed three times, but, unfortunately, during the absence of the bee-keeper, the bees had been left in charge of the servants, who neglected to attend to them, so that all the three swarms flew away and settled in the jungles, where they probably perished during the rainy season.

For the last few years, experiments have been made to acclimatize the Vanilla in Ceylon, but only by artificial fertilization was it found possible to get these plants to produce mature fruit. The *Tropical Agriculturist* calls special attention to the numerous visits of Apis mellifica to the Vanilla blossoms, and adds that the owner of the plantation has for this reason entirely discontinued the fertilization of the Vanilla flowers by artificial means. In case the cultivation of Vanilla in Ceylon should prove successful, the importation of Apis mellifica will have largely aided to bring about this result, and it would be quite worth while for this purpose alone to keep bees in Ceylon, even if they had to be supplied with food during the rainy season.

"* It may be assumed that Apis indica is the bee referred to above. The indigenous Apis indica of Java was described by Latreille ("Annales du Museum d' Hist Nat., 'v., p. 170, No. 4) as Apis Peronii. It is hardly to be supposed that experiments should have been made to domesticate the small East Indian bee, Apis florea.—EDITOR."

☞ Prof. A. J. Cook, who each summer during several years has worked in the Michigan Agricultural College apiary, with a class of from 20 to 40 students, all entirely unused to bees, says he has found no proof of the statement that bees know their master, and are more likely to sting a stranger.—*Exchange.*

Bee Convetion at Toledo, O.

The next annual meeting of the Tri-State Bee-Keepers' Association will be held on the 12, 13 and 14 of next Sept., during the week of the Tri-State Fair at Toledo, Ohio. It is customary to say that Messrs. So and So, "and other prominent bee men will be present," etc., etc. Well, we have quite a number of "prominent bee men" (prominent at home) in this region, and they know how to raise the bees, get the honey, cure foul brood, and winter the bees too; but if Mr. Heddon is well enough to be at the meeting and the fair, we will pump him on wintering, and Mr. Muth on foul brood, and Novice, if here, on general principles, and the the editor of the BEE JOURNAL to fill in where the rest lack. We do not expect to have any long essays or speeches. It being the week of the fair, we expect the great attraction for bee-keepers will be the Bee and Honey Show, and such bee-keepers and their friends as desire to stay several days can bring their "eatables" and blankets with them, and camp on the fair grounds. One or more tents will be provided for such as make application to me a few days before the fair, at a cost that will pay for the use of the tents, but we hope to be able to borrow tents and so save expense.

A premium is offered for the foundation machine making the best foundation for the brood-chamber on the grounds, and two mills have already arrived for that purpose, and the makers of three other machines have promised to be here if possible.

A premium list with entry blank rules and regulations, railroad fares, and freight rates, etc., will be sent free to all applicants.

DR. A. B. MASON.
Wagon Works, Ohio.

☞ The Northwestern Illinois, and Southwestern Wisconsin Bee-Keepers' Association, will hold its next meeting on Sept. 4, 1883, at John Swanzey's, 2 miles South of Ridot, Stephenson County, Ill. There will be facilities to take persons from the station to Mr. Swanzey's.

JONATHAN STEWART, *Sec.*

Local Convention Directory.

1883. *Time and Place of Meeting.*

Sept. 4.—Ohio State, at Columbus, O.
D. Spear, Sec.

Sept. 4.—N. W. Ill., & S. W. Wis., at Ridot, Ill.
Jonathan Stewart, Sec.

Sept. 12.—Eastern Indiana, at Richmond, Ind.
M. G. Reynolds, Sec., Williamsburg, Ind.

Sept. 12-14.—Tri-State, at Toledo, Ohio.
Dr. A. B. Mason, Sec., Wagon Works, O.

Sept. 18-20.—North American, at Toronto, Ont.
A. I. Root, Sec., Medina, O.

Oct. 9, 10.—Northern Mich. at Sheridan, Mich.
O. R. Goodno, Sec., Carson City, Mich.

Oct. 10.—Cass County, at Logansport, Ind.
De Witt Brown, Sec.

Oct. 17, 18.—Northwestern, at Chicago, Ill.
Thomas G. Newman, Sec.

Oct.—Northern Ohio, at Norwalk, O.
S. F. Newman, Sec.

Dec. 5-6, Michigan State, at Flint.
H. D. Cutting. Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

Honey Flora—White Sage.

The California *Rural Press* contains the following description of this great honey-producer, the white sage :

Not only is California famous for its specimens of vegetable growth of huge proportions, but also for some of much less imposing appearances. Among the latter there is no plant that has made this State more renowned than has the white or honey sage of southern California. Hardly ten years ago it was looked upon as a useless shrub, scarcely fit for sheep to browse upon. Since then the honey bee has made it famous. When it became known that honey flowed from the flowers of this plant, as it was never known to do in old Greece, and of a quality far superior, thousands of colonies of bees were located in the sage region. During our favorable years these bees gathered the honey from the flowers about them in such large quantities that many an ocean craft was weighted down with the nectar.

To all parts of the world has this delicious article been sent, and everywhere it has secured for the place from whence it came praises that no other honey had ever received. Besides the good words this State has obtained by its excellent honey, the people have received thousands of dollars which would never have entered the State if the nectar was wasted on the desert air, or if the plant in question did not exist in our midst.

It belongs to the genus *Audiberatia*, of the order *Labiatœ*, to which also the garden and other sages belong.

These plants are of great value as bee pasturage, as they are of easy growth, will thrive on drier soil than will most other honey-secreting plants, and their season of efflorescence continues many weeks. The writer has cultivated the white sage in Alameda county, near Berkeley, and as a result he finds that it thrives remarkably, growing luxuriously on cultivated soil, and producing an abundance of bloom. It is a plant of which every apiarist should disseminate the seeds as much as possible, so that in the course of a few years, large patches of the plants may be found in the hills and valleys in various parts of the State. By doing this, such a thing as a short honey crop will hardly ever be known.

The Rev. J. C. Nevin, of Los Angeles county, in writing of the sages lately, says: "There are at least a dozen specimens of *Audiberatia* on the coast included under the popular names of 'white' and 'black' sage. The 'white' (*Audiberatia Polyszachya*) differs very much in the form of inflorescence from all the others, and from that of the genuine sage. Its whole appearance makes it a rather striking plant, and when once known, to be easily recognized any where. Its range extends from Santa Barbara to San Diego. All lovers of the beautiful white honey gathered from its flowers ought to know and regard it with feelings of gratitude.

'Ball,' 'button,' or 'black' sage is undoubtedly a common name for several distinct species. Their general habit is much the same, whilst ordinarily the specific distinctions may not be so obvious. The whole appearance is more nearly like the true sage than is the 'white' above mentioned. Of the number, *A. Stachyoides*, *A. Palmeri* and *A. Clevelandi* are very closely allied and most difficult to distinguish. *A. Stachyoides* ranges from the Contra Costa mountains southward, while *A. Palmeri* and *A. Clevelandi* are confined to the southern part of the State. Just what precise form prevails around Los Angeles has not as yet been definitely settled; but it is mostly near to, if not identical with *A. Palmeri*, the typical form of which is found in San Diego county."

Notice to Iowa Bee-Keepers.

Quite a large number of bee-keepers in our State have expressed a desire for the formation of a State Association. A consultation with others has resulted in the decision not to attempt to hold a meeting during the coming State Fair, but if thought best to hold one during the time of the meeting of the State Agricultural Society at Des Moines next January. All bee-keepers who may be present at the Fair are earnestly requested to report to the Rev. O. Clute, at the Apiarian Exhibit, on or before 1 p. m. of Tuesday, the 4th day of September, 1883, who will give them notice of a meeting for consultation, and also for the selection of a committee of arrangements if one is deemed necessary.

O. O. Poppleton,
Vice-Pres. N. A. B. K. Society.
Williamstown, Iowa, Aug. 10, 1883.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

Fairs.—To any one exhibiting at Fairs, we will send samples of the Bee Journal and a colored Poster, to aid in getting up a club. The Premiums we offer will pay them for so doing. For a club of 8 subscribers to the Monthly Bee Journal, or 4 Weekly, we will present Dzierzon's Rational Bee-Keeping, price $2.00.

Honey and Beeswax Market.

Office of American Bee Journal,
Monday, 10 a. m., Aug. 20, 1883.

The following are the latest quotations for honey and beeswax received up to this hour :

CINCINNATI.

HONEY—The demand for extracted honey is exceedingly dull; for comb honey, only fair; arrivals are plentiful. Stocks are large in the hands of corn merchants and others. Our own supply is larger than ever, and, for the present, we cannot compete with commission merchants. We may have to offer lower figures. Our prices so far were 7@9c. for extracted, and 14@16c. for comb honey on arrival.

BEESWAX—Arrivals of beeswax are good at 25@28c., and the demand is fair.

Chas. F. Muth.

NEW YORK.

HONEY—We take pleasure in quoting the following prices on honey, obtainable in our market: Fancy white clover, 1 lb. sections (no glass) 20@21c; fancy white clover, 2 lb. sections (glassed) 18@20c; fair white clover, 1 and 2 lb. sections (glassed) 16@17c.; fancy buckwheat, 1 lb. sections (no glass) 15c.; fancy buckwheat, 2 lb sections (glassed) 13@14c.; ordinary buckwheat, 1 and 1 lb. sections (glassed) 11@13c.; extracted clover honey in kegs or barrels 9@10c.; extracted buckwheat honey in kegs or barrels 7½@8c.

BEESWAX—Prime yellow beeswax 31@33c.

H. K. & F. B. Thurber & Co.

CHICAGO.

HONEY—There has been a marked increase in sales this week of comb honey. New crop, prime 1 lb. frames (pure white) have sold at 20c. when in fancy cases, in a small way; good many sales at 18c. for some grade 1½ to 2 lb. frames (or prize package) when well-filled and white, 16@17c.; not quite so well filled, 15c.

Extracted is still slow, but late receipts have been riper, and there is more inquiry; 9@10c. for choice clover; dark and buckwheat, 7@8c.

BEESWAX—30@35c. for prime to pure yellow.

R. A. Burnett, 161 South Water St.

SAN FRANCISCO.

HONEY—A dry North wind in May made our honey crop short in the Southern counties, and ½ of a crop is a full estimate for California. Not much arriving, and the small amount coming forward is mostly medium quality. For extra white, either comb or extracted, the market is firm. White to extra white comb 16@20c.; dark to good 10@13½; extracted, choice to extra white 7@9c; dark and candied 6½@—;

BEESWAX—Wholesale 27@28c.

Stearns & Smith, 423 Front Street.

ST. LOUIS.

HONEY—In better demand, but readily obtainable at quotations; offerings plentiful—largest of strained and extracted. We quote new at 6½@7½ for strained or extracted, and 14c. for comb. Jobbing sales of choice, in fancy packages, more. Old or inferior, nominal.

BEESWAX—Easy, with sales at 26c.

W. T. Anderson & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—New honey continues in good demand at 18@19c. for choice 1 lb. sections, and such are readily placed as fast as received; 2 lbs. not so active, at 16@18c. Second quality sells 14@17c. Extracted not in demand.

BEESWAX—None in Market.

A. C. Kendel, 115 Ontario Street.

BOSTON.

HONEY—We have had a shipment the past week from J. E. Crane, and a good sized shipment from J. V. Caldwell, of Cambridge, Ill., whose honey we had last year.

We quote our market prices, as follows: White clover, one lb. combs 20@22c; white clover, 2 lb. combs 18@20c.; extracted, 9@10c.

BEESWAX—Our supply is gone; we have none to quote.

Crocker & Blake, 57 Chatham Street.

CORRESPONDENCE

For the American Bee Journal.

A Visit to a School of Apiculture.

WM. F. CLARKE.

After a residence of over ten months in a country destitute of bees, it was a pleasure which only a bee-keeper can understand to find myself in a large apiary once more, like Mr. Heddon's, listening to the old familiar hum, and watching the varied movements of the busy little honey-gatherers. At this time (Aug. 13), there is a cessation of the liquid flow, the fall flowers not having yet come into bloom. Here and there a few heads of late white clover could be seen, which the bees were eager to rifle. The asters too, showed some blossoms; the boneset looked white, and the goldenrod yellow with promise; while the melilot was plainly on the wane. Bee pasture was indeed scant, so that it was a good opportunity for judging the disposition of the "cross hybrids." I must give them the credit of being as peaceably-inclined as any bees I ever saw in like circumstances. Here, in an apiary of about 300 hives, with honey scarce, and queen-rearing operations going on extensively, I saw no signs of robbery or fighting, and did not detect a single angry buzz. The most exemplary order and quietness reigned supreme. There seemed to be no Satan on the scene, to "find some mischief still, for idle" bees "to do."

My chief interest in visiting Mr. Heddon at this time was to investigate the condition and prospects of his school of apiculture. As the father of this scheme, I felt naturally anxious to know how it was working. It has not been carried out as extensively as I had anticipated and hoped, owing mainly to a practical difficulty not fully foreseen at the outset. To run an apiary for profit requires constant supervision, and enough help to do the work efficiently—no more, no less. This is hardly compatible with having an infinite number of pupils to instruct in the principles and manipulations of bee-keeping. When applications began to pour in upon Mr. Heddon, in response to his advertised readiness to take a limited number of students, this difficulty loomed up, and he saw no solution of it for the present season, but in taking only so many as he could use to advantage in carrying on his own apiary. Hence he selected from about 20 applicants, 4 young men, whose replies to a string of questions appeared to single them out as especially promising. Some instinct, unerring as that of the bee in its choice of flowers, must have guided the selection of these pupils, for a likelier quartette could hardly have been formed. They are, Fred S. Carrier, Benzie Co., Mich.; Wm. Stolley, Grand Island, Neb.; F. S. Williams, Susquehanna, Penn.; and W. Hickox, Cleveland, O. Three of the four are bee-keepers of two or three years' standing, and the fourth, though less experienced in bee-keeping, is specially helpful to Mr. Heddon, and his companions, in consequence of being a skillful short-hand writer.

We had a session of the school, which was more like a miniature bee convention, in the evening of the day I spent with Mr. Heddon, at which I obtained ample evidence of the thoroughness with which these young men are being instructed, and the usefulness of such a plan of teaching. The students were unanimous and warm in their testimony to the good they are deriving, and the ready part they took in the discussion of various intricate bee matters, bore out their testimony, and proved that these young men are being trained to understand practical apiculture most thoroughly. The best feature in the case, to my mind, is the fact that they are "enthused" with their business. A man must have the enthusiasm of his calling, to achieve the best success in it, and the teacher who cannot create this, is a failure.

The practical difficulty I have indicated is precisely that which besets agricultural colleges. Many farmers demand that these institutions should be self-supporting, which they cannot be, even though a portion of the time is given to manual labor. Principles must be taught, and what work is done will be more or less unskilled. A school of agriculture or apiculture must be subject to these two drawbacks. You cannot take raw youths, instruct them in the theory and practice of farming or bee-keeping, and run a farm or an apiary as a source of profit at one and the same time. It would be a poor factory that was manned wholly by apprentices.

There are, and I suppose always will be, two classes of bee-keepers, the amateurs and professionals; those who keep bees for pleasure from scientific interest, and those who keep them as a source of profit, and a means of livelihood. I am but an amateur, and doubt my ability to take an apiary and manage it so as to make it very profitable, though I know the theory and manipulations pretty well. Before going into apiculture as a business, I should want to spend a season with a practical bee-keeper like Mr. Heddon. The honey market of the world must be supplied by those who keep bees for profit, and know how to make money at it. How are the practical bee-keepers to be raised up? Shall we leave the thing to chance, and let men grope their way through labyrinths of failure, into the paradise of success, or find ways and means to train them for the business? If bee-keeping is to take its proper place among the industries of the world, it would seem to be necessary to provide an education for it.

Such an education must comprise, first, a knowledge of the principles of bee-culture; and second, the business management of an apiary. The first could be given in a school of apiculture with a few bee hives to experiment with. I do not see how the second could be so easily and quickly imparted as by a season's work under an accomplished bee-keeper. It is one thing to be able to handle bees, it is another and a vastly different thing to manage them so as to make them pay. Mr. Heddon says that if he could have spent a season early in his career with such apiarist as the late Adam Grimm, it would have saved him years of blundering and discouragement. No doubt many have blundered along until they have become despairing, who might have been put on the high road to success at once by an experienced teacher. Those who are only anxious to make money by selling apiarian fixtures, will not care how many blunder into hopeless discouragement, but all who wish to see bee-keeping exalted into a regular profession or business, will desiderate some plan by which apicultural capacity can be developed into success.

Mr. Heddon's pupils are of the opinion that it would pay any young man who intends to make bee-keeping a life-work, to attend a school of apiculture where only a few hives are kept for experiment, but they consider themselves highly fortunate in being drilled into the management of a large apiary, conducted with a view to dollars and cents. Any number of young men could be taught elementary principles and manipulations in a school. Only so many as are required to do the work well, can be drilled in a practical apiary. Mr. Heddon has restricted himself, the present season, to that number. The results are, that the apiary is well "tended," everything about it is in "apple-pie order," the students are well satisfied, and so is their teacher. The only regret is that, apparently all this cannot be accomplished on a larger scale.

Chicago, Ill., Aug. 15, 1883.

Prairie Farmer.

Bees Clustering Outside.

MRS. L. HARRISON.

A lady asks why her bees swarmed seven times and returned to the same hive? She says: "I saw the queen fly away with the swarm and return twice, so I know she can fly. The bees cluster on the outside of the hive and do not appear to work much. What makes them act so?"

We do not know why they did so, but if a little discipline had been applied at the right time, it would have remedied the evil. Had the old hive been removed and a new one substituted, the colony would have entered it on their return, and then it could have been placed on a new stand and the old one replaced. Yet queens are sometimes contrary, and this one might have left the new hive and returned again to the old one followed by her subjects. We have sometimes lifted off the surplus boxes from a colony acting in this manner, and removed all the brood frames, brushing off the bees. We extracted the honey from such frames as contained it, and those that had brood were given to nuclei. Frames containing empty comb were given the bees, the surplus boxes replaced, and they were soon working with energy. If no empty comb or foundation are at hand, frames can be given them. It is very poor economy to have bees clustered on the outside of the hive during a flow of honey, and they should be induced to go to work. An extractor has the reputation of curing laziness in bees most effectually, when it is rightly applied.

We have just now been reading in the Bee Journal, how a swarm of bees that clustered on the outside of a hive, built comb in a box placed near them. We once read of a jug being found in the fall full of honey, that had been thrown carelessly down near the entrance to a hive.

The nights have been quite cool for some time, and though the sun is hot during the day, the air is cool. Poor corn and honey weather. To-day (Aug. 3) the thermometer marked about 60° at 8 in the morning. There is enough honey gathered daily to keep the queens laying, which will insure plenty of workers for fall bloom. Surplus boxes should be in readiness, for if the weather is propitious a flood of honey like that of last year may soon visit us. The rainy weather of the forepart of the season was conducive to the growth of fall flowers.

Peoria, Ill.

Read at the New Jersey and Eastern Convention.

Wintering Bees in Clamps.

C. J. ROBINSON.

The old problem—successful method of wintering bees—is still a mooted question, and we are justified in discussing the subject from each other's standpoint of observation, take the differing ideal modes and shake them together in a bag, then dump and mark the one that comes out first for "the coming" method. Let us have anything that tends to promote progress.

My experience with bees began while a youth, and dates farther back, perhaps, than any other American bee-keeper now living.

Winters in this climate have ever proved a serious drawback to success in the business. Were I omniscient in knowledge, I could not devise a method of wintering that would be exempt from death casualties incident to the vicissitudes of a northern climate. Situated in a cold region, we must accept of the conditions, and try again and again if we fail of success. As yet we are ignorant of the insect nature and natural history of the honey bee. Indeed, who can answer definitely three per cent. of the questions that naturally arise in the experience of beginners in bee-culture? One inquiry would be, "What mode of wintering bees is a success without casualties incident to boreal winters?" Such question, however, is as absurd as would be the inquiry, "How can we rear the children to have all arrive at adult age?"

Many contrivers of hives claim that their "invention" contravenes all danger from cold, and renders nugatory the ungenial winter. Yet the bills of mortality and loss continue about the same.

The grand difficulty in the premises lies in our acquaintance with the faculty of the bee, and the science pertaining thereto. We fancy that bees are dependent for their well-being on the same agencies and like uses of those factors as ourselves. A moment's reflection can scarcely fail to make such supposition an obvious error. It is well known that bees are so constituted that they have the faculty of remaining torpid (chilled) during several days, and then from genial warmth, revive again. Moreover, the normal condition of bees while reposing in confinement caused by a low temperature, is a semi-dormant state in which there is scarcely any animate action, and very little consumption of vital air (oxygen) and carbonaceous matter (food), nor much waste of tissue. Hence the preaching about "pure air," unless bees be in a state of activity, is all bosh; no matter from whence it emanates.

The more inanimate bees remain, the less oxygen and food they require, and the less consequent waste of tissue and vitality (wearing out) during a given period—during winter. Therefore, the conditions that afford bees the most perfect tranquil repose through winter is the most advantageous. Bees in a torpescent state repose safely in a dead-air chamber, in which there is no oxygenated atmosphere to excite vitality. They must consume oxygen, however, have pure air to respire when not in a quiescent state. The stupid reasoning that honey bees require "pure air" and "ventilation" through the winter's reign is as fallacious as would be a theory set up that "sleepers," the bear and the marmot, require fresh air for respiration during their dormant state. In studying the subject of safe wintering, we should bear in mind that the normal condition of bees is not at all times the same, but that they are in some respects like the animal sleepers and unlike other animals. It is well known that bees, while clustered in a circulating atmosphere, do not repose quietly in a temperature considerably below the freezing point. The colder it is, the greater the action—consumption of oxygen and food—to generate warmth needed to sustain life. It is the "happy mean"—near the freezing degree of temperature that affords the desideratum—quiescent state. A variation of a few degrees either above or below freezing, changes the circumstances of condition very materially. It would be the same with "sleepers." If, during the winter, the condition of bees be such that they consume large quantities of food, they thus live fast and grow old from the required expenditure of vitality and tissue, consequent on the taxation of generating warmth, or active occupations in or both in or out of the hive; that is, they run their allotted race sooner, a sequence that is one of the factors of "spring dwindling."

It is obvious from the view presented in the foregoing that the successful mode of wintering is attained only, if at all, by the bees reposing in an atmosphere but slightly charged with oxygen, and the temperature as indicated. This end is best attained by means of "clamps" so-called, for winter quarters.

My experience with clamps extends over a period of a quarter of a century. I derived my knowledge of the clamp method first from Rev. L. L. Langstroth's manual. Mr. L. got the plan from a German (indirectly, I believe) who practices wintering bees in clamps—burying hives in about the same way potatoes are kept in "holes."

In my first experience with clamps I missed the mark—the end I now have in view for success. Through my ignorance, a failure on the part of "mother nature," I fancied that my repository for bees must be ventilated else respiration would cease, followed with death. I discovered that in such supposition I was in error. I constructed my clamps at first with air-tubes at the bottom of the clamps, and placed a chimney ventilator in the top, so as to provide fresh air circulating through the interior of the clamp. Such arrangement defeated the valuable points gained by a different arrangement which excludes the external atmosphere and provides a partial vacuum surrounding the hives. My first clamps, and such as was described in said manual, are substantially the same sort of repository as cellars.

My mode of constructing clamps is quite simple in arrangement. I first dig a pit in mellow earth some 20 inches deep, in the form I purpose packing or placing my hives to bury. Then nearly fill the pit with dry straw, thrown in loosely, place strips across the pit, on which place the hives. Now start walls made of boards, so as to provide a dead-air space all about the hives. The walls need not be nicely made, a skeleton frame work that will keep a coat of dry staw a little distance from the hives is all that is rquired. The vacant space in the clamp should be about equal to one-half the space occupied by the hives. All of the earth on the bottom of the clamp should be covered with straw, so as to prevent moisture from getting within the hives. A covering of earth should be put over all in the way potatoes are covered in what is called "potato holes." When the hives are deposited over the pit where they are to remain, I arrange for ventilating, that is, do not close entirely the entrance at the bottom, and have on top a "burlap," or something that allows rarified moist air to permeate upwards. I put a tube in the top of the clamp, and let it remain open until the bees within become quite dormant, and cold winter sets in, then close the ventilator until spring-like weather, when it may be opened.

It is known that bees buried under snow will winter safely, providing there is a vacant space within the hive, or surrounding it externally. Depositing bees in clamps should be as late as it can be delayed before freezing of the ground prevents the undertaking.

For the American Bee Journal.

The School of Experiments.

W. H. STEWART.

Bee-culture is a trade. Many engage in the business, but only a few succeed and become masters; such persons are possessed of an enterprising spirit. They not only love the arts mechanical, but they delight in the arts fine. They are not always asleep when their eyes are shut. They are often found performing one job mechanically with their hands, and at the same time engaged mentally solving some knotty problem—exploring new and untried fields of usefulness. Such persons are full of new plans and projects. They are never satisfied with the present state of things. Their mental feelers are ever reaching outward and onward, and coming in contact with blessings that never have been, but are to be enjoyed. Such persons never have time to be lazy. They have no time or disposition to write letters for a department of "Blasted Hopes." No difference whether they occupy a higher or lower step in the ladder of progress; either is to them but a temporary position from which they are ever climbing to the next higher.

From their standpoint the world is full of beauty; every cloud has a silver lining; every shadowy vale is spanned by a beautiful bow of promise. To them the word demand means a corresponding supply. To them, bad luck in bee-keeping means improper management. If they get a fine crop of honey this year they are thankful, but not satisfied. They will strive to do better next year. It is to this class of bee-keepers that we are in debt for the present improved hive; for the present strains of bees; the improved modes of wintering bees; the improved methods and fixtures for feeding bees; artificial swarming; preventing natural swarming; preventing drones; rearing queens; supplying with artificial combs; preventing the ravages of the moth; successful handling of bees without fire and brimstone, and without being stung to death.

To this same class of bee-keepers we must continue to look for answers to the many questions not yet answered. To them we must look for ways and means by and through which the many present and future demands are to be supplied. Obstacles have ever and ever will contend for the way that leads towards the promised land of success. Another class of persons undertake bee-keeping because they are fond of honey; or, perhaps, they hope to realize large profits from a small amount of capital or labor that they think to invest in the business. They admire the beautiful honey that the masters have put in the market, but they fail to discern the close practical application of the finely-spun theories, the never-tiring energy, the non-surrendering enterprise that has been most potent, and is so indispensible to successful bee-keeping. They are slow to pay their money for bee papers, or take the time to read one; no patience to lie awake two or three hours in the stillness of night in mental labor, devising ways and means by and through which they may realize a large crop of fine honey.

His grandfather kept bees in hollow gums, and bees in the natural state live in old hollow trees, and it is (to him) all nonsense to attempt an improvement on nature's ways and means. He believes that the world is as flat as a pan-cake, and after about two or three turns of the crank, he finds that he has had bad luck in bee-keeping, and his bees are as flat as a pan-cake, too.

The above mentioned classes of bee-keepers are the two extremes, viz.: the most successful, and the most unsuccessful.

There is another class of bee-keepers which we will call the conservatives. They are the middle men (not women). We do not know of a female bee-keeper who is not of a progressive nature. This conservative class of men are often ready to invest in bee-keeping, and sometimes are easily persuaded to use hives and other fixtures that the advanced bee-keepers have long ago laid aside; or he may, and often does, start out with the latest improvements. He learns to use those things, perhaps, tolerably well, and is perfectly satisfied. He thinks that the art of bee-keeping has been worked up to a science; that the whole truth is told; that those who propose to give any new light on the subject are fanatical crazy heads, and unworthy of his attention. Let well enough alone, is his watchword. We admit that he is right to a certain extent, for we have all learned that it is better to go slow in making great changes without first counseling with that tried and trusty teacher—experience. Yet there are those that have learned many items in the school of experience, and as they meet with partial failures, they are able to recall all those lessons, and arrange them in regular order, and then spell out along the line a supply for each demand; and yet these conservatives are ready to condemn (without fair trial) each newly discovered truth.

When it became desirable to save honey combs for repeated use, then the progressive mind gave the extractor, the value of which it is hard to over-estimate. Yet, ever ready at his post, the conservative bee-keeper, and also the conservative honey consumer raised all sorts of baseless objections to its use. It is only because of the potency of truth and usefulness that the extractor is to-day in general use. Again, when comb foundation was introduced many who thought that they knew about all that there was of bee-keeping, expressed an opinion that it would never come into general use. Many very knowing ones dubbed it fish-bone in the honey. Yet because of its worth and usefulness it has come into general favor, even with the conservative bee-keeper.

Now comes a condition upon the bee-keepers the world over that is creating considerable alarm. They have learned to save all their beeswax, work it over into comb foundation and give it back to the bees, thereby saving them the time and labor of producing their own wax. Thus a perpetual consumption and non-production of beeswax has culminated in a wax famine. Now the question is, what shall we do for wax, and this is the most important item in all progressive bee-keeping. How can we successfully winter bees and prevent spring dwindling are questions that threaten to baffle the wisdom of the closest observers; but if these two difficulties should be overcome, the spare combs and surplus wax will be diminished in proportion. to our success in preserving the bees. However, the wax must be had, and will be forthcoming in due time, but

Conservatism in vain may try,
  Exhausted fields for fresh supply;
New-born thoughts must lead the van,
  To fields as yet untried by man.

Banish all fear, fraternal friend,
  Bee-culture has not found its end;
Although from giddy heights you peer,
  Trembling lest the end be near.

Let us try what covert fields
  Of art and enterprise can yield.
The astute brain and cunning hand,
  Meet, then embrace, each demand.

Orion, Wis.

Rural New Yorker.

Bee Hives Made of Paper.

CLARK D. KNAPP.

Those who have been the most interested in the keeping of bees, have for years been trying to invent a hive that would be equally well adapted to the cold of our winters and to the heat of midsummers. I saw in the *Rural* a short time ago an article upon the subject of bee-hives, which was illustrated, but the writer did not touch upon the question of a summer and winter home for the bees. Many a winter hive has been invented, but, as a general thing, apiarists have given no thought to the comfort of the bees in the long, hot summer days, except by boring a few holes in the hive for ventilation.

I have always thought that the hot rays of the sun in June, July and August were unhealthful for the bees in the hive, the heat blistering clear through the wood and making the inner part of the hive so hot that the industrious little fellows cannot work with any degree of comfort. Then, in addition to the sun's heat, there is the animal heat of the bees! What a hot place must the interior of the hive be for so much industry!

Now I am opposed to placing the hives in the shade. The bees need the sunshine upon the outside, but not upon the inside of the hive. They are early risers. They are up, dressed, have breakfast and are at work early when the morning sun glistens upon the dew drops in front of their mansion. In the State of New York the bee has no time to wait for the sun to warm the damp air beneath the thick branches of some moist, moss-covered apple tree. Therefore, I put my bees in what I choose to call my summer-and-winter hive, then set them out in God's sunshine to enjoy themselves as they work.

I make my hive with an inner and an outer wall. These walls are one inch apart. Before I put the top on I take paper—old newspaper, in fact any kind of paper—and stuff the space between those walls full, pounding it down as hard as I can without bulging the boards that form the inner and outer walls. I have two half-inch top ventilators, and in the summer I give a good ventilation from the bottom. That is all the secret there is to my summer-and-winter bee hive. It can be made in any shape and after any pattern. You can have any style of frame, or it can be made without frame.

Now, reader you ask why use paper? Is not sawdust or straw just as good? I use paper because it is a non-conductor of heat. It is one of the best non-conductors of heat known. Now it stands to reason, that if paper will keep the heat of the sun out of the hive in the summer time, it will keep the heat of the bees in the hive in winter. And that is just what the bee men have been looking for for years. Try it, brother bee men, and I believe that you will well satisfied with the experiment.

For the American Bee Journal.

Bees, Flowers, Honey and Music.

G. W. DEMAREE.

The Union Kentucky Bee-Keepers' Society has just held one of those delightful social meetings which its members and others have so much enjoyed in the past. This time the meeting was held at the apiary of W. T. Stewart, located on the princely estate of Mr. M. B. Moody, four miles north of Eminence, in Henry county. On the morning of the 14th inst., I boarded the accommodation train and was landed at the flourishing town of Eminence, at an early hour, where I was met by Dr. Ed. Drane and James Drane, the latter an uncle of the Doctor, and although an aged man, he runs a fine farm, and also a fine apiary of Italian bees on it, who took me in their "rig" and drove rapidly to the place of rendezvous. I shall not soon forget the warm and cordial reception with which we met at the good graces of Mr. Stewart and lady, and Mr. Moody and family. Every breeze seemed to waft the glad words "welcome, welcome."

After the company had well gathered, President Drane called the meeting to order, and there, under the shade of the trees near the apiary, many interesting subjects pertaining to the business of bee-keeping were warmly but pleasantly discussed.

The present season has been one of unprecedented "swarming," and hence this subject was thoroughly ventilated. Most, if not all of the members of our association have had all their "theories" pertaining to the "controlling of swarming" knocked into "pie" the present season, and hence they were humble enough to be instructed by each other's experience.

After a pleasant bee talk, Mr. Moody invited the convention to adjourn to the grove, which surrounds his stately family residence, where we found a table loaded with all the good things that the blue grass regions can give. The ladies have levied a strong and lasting contribution on our gratitude for the bountiful and graceful manner in which they catered to the wants of the "inner man." After dinner was over the company gathered in the capacious parlors where they were regaled by the Misses Moody's with as fine music, instrumental and vocal, as was ever heard outside of the professional circle. What is more appropriate than bees, flowers, honey and music?

The company retired to the apiary and resumed the "bee talk," when Mr. Moody came forward, and in a jocular way said, that he wanted to test the members of the society as to whether they had any ideas of "old bee-culture," that he had a "bee tree" down in the woods, and he would order the "boys" (the farm hands) to cut it down. Some of the company were right in for the sport, but others demurred, saying that they had no inclination to handle bees "laying around loose." Mr. Moody withdrew the motion, being too magnanimous to insist on anything without universal concurrence. The tree was left standing.

W. T. Stewart read a letter from W. W. Williamson, Lexington, Ky., discussing the propriety of our bee-keepers attending the convention at Toronto, and proposing an excursion trip of many Kentucky apiarists.

After drafting suitable resolutions, tendering the thanks of the society to Mr. Stewart for his fine display of bees and honey, and to Mr. Moody and family for hospitalities, the convention adjourned; after which the members lingered for sometime as though enchanted by the splendor of Mr. Stewart's finely fitted-up apiary. If there is a finer apiary in the South than Mr. Stewart's, I have no knowledge of its whereabouts. Mr. Stewart is an artist and painter, and this advantage has enabled him to make the finest display of painted hives. Nearly all his hives differ in color, and are tastily trimmed with appropriate shading.

To set off the apiary to the best advantage for the occasion, Mr. Stewart had prepared a large glass show case in which was a "stack" of beautiful section honey in the form of a pyramid, the cap piece of which was a "wee bit" of a section of about ¼ pound. On top of the case were some Muth honey jars filled with extracted honey.

This case occupied a conspicuous place in the lawn just in front of the center group of the apiary, and was admired by all who saw it, because of the delicious contents within. The bees no less admired the white pyramid, and might be seen poised on the wing gazing through the glass with covet in their eyes.

A novel and pleasing feature about Mr. Stewart's apiary is that instead of numbering his hives with figures in the usual way, his hives are named after some of the prominent bee-keepers. In the middle of the centre group is T. G. Newman, Editor of the AMERICAN BEE JOURNAL. This is a large chaff hive, splendidly painted, and the "lettering" is beautifully and artistically executed. On the left of this central figure, and composing apart of the group, may be seen L. L. Langstroth, Dr. Dzierzon, Charles Dadant, E. Secor, G. W. Demaree, Lucy Harrison, G. L. Viallon, James Heddon, W. M. Kellogg, Ira Barber, R. Wilkin, H. Alley, A. I. Root, G. W. Ashby and O. M. Blanton. On the right of the central figure are W. R. Howard, W. F. Clarke, Mrs. Luper, C. H. Lake. H. R. Boardman, C. C. Miller. L. C. Root, J. H. Morton, H. Roop, E. B. Southwick, E. E. Hasty, G. W. Knight, J. M. Hicks, D. A. Pike, F. Benton, R. M. Argo, O. O. Poppleton, and C. N. Abbott. Immediately in front of the center group stands a fancy little tall cottage hive, neatly trimmed with light brown, this is Prof. A. J. Cook. On its right stands E. Drane, D. A. Jones, N. P. Allen, G. M. Doolittle, L. Johnson and Frances Dunham.

When the work of "lettering" is finished there will be 180 bee-keepers and writers on bee-culture in one apiary—a pretty good force you will admit. Stretching away down the line towards the honey house, are G. M. Alves, J. B. Baker, T. Balcomb, M. M. Baldridge, A. Benedict, O. F. Bledsoe, E. L. Briggs, J. P. H. Brown, T. J. Burrill, W. H. Bussey, J. V. Caldwell, B. F. Carroll. F. B. Cheshire, R. Corbitt, C. H. Dibbern, L. J. Diel, F. L. Dougherty, J. Craycraft, J. W. Bagley, J. D. Evans, E. T. Flanagan, G. Grimm, H. S. Hackman, W. S. Hart, G. W. House, H. L. Jeffery, E. C. Jordan, A. R. Kohnke, C. F. Koch, J. E. Lay, J. Lee, M. Mahin, J. B. Mason, A. F. Moon, R. M. Osborn, E. Parmley, J. L. Peden, A. Pettegrew, J. E. Pleasants, Mrs. A. M. Sanders, G. L. Tinker, Della F. Torre, O. M. Townsend, T. L. VonDorn, W. W. Williamson, Wm. M. Rogers, S. M. Locke, J. M. Brooks, Mrs. L. C. Axtell, E. M. Hayhurst, James H. Reed, Wm. F. Kanyler, John T. Connley, C. H. Dean. and others whose names I failed to get.

Of course Mr. Stewart keeps a record of what results he gets from his colonies; without the least idea of his methods, I should presume that it would run somewhat after this fashion: D. A. Jones, 1883, 400 lbs. of extracted; queen, best Italian stock. James Heddon, queen "mismated," must be superseded. G. W. Demaree, too many "stripes" entirely.

Well, now, to be serious, Mr. S. claims to have taken about 400 pounds from the colony in the hive of D. A.

Jones. This, with us, is considered an extraordinary large yield from one colony, as we depend alone on white clover for surplus.

Members reported their bees in good condition, enough honey coming in each morning to keep up breeding, which will keep the workers in good trim for the fall harvest, if we are blessed with a flow of nectar.

Christiansburg, Ky.

Lewiston Journal.

Where do Bees Cluster in Winter.

W. M. F.

I have had occasion to inspect nearly 50 hives where bees have died during the past winter and spring, in this and adjoining towns. I have also observed the nature and habits of the honey bee for the last 30 years, and hence I may be allowed to speak somewhat authoritatively on the above subject. In nine-tenths of those colonies which died the past winter, I have found them clustering close together at the top of the frames, with honey at one or both ends of the hive. I refer to bees wintered on the summer stands, with chaff protection above and around them. In a few instances I have found some honey at the lower part of the frames, and the reason is obvious. I would inform Mr. Churchill, that bees do not cluster, in late fall at the top of the hive, unless the colony is quite large and fills the whole space of the frame; but, on the contrary, where they reared their brood, on the empty comb of the brood nest, let it be where it will, but usually in the centre of the hive below and between the capped honey. Usually when the brood comes out late in autumn, there is stored some honey below the brood nest, if there has been no place to store it elsewhere; when it is stored below and they have clustered where the brood was last reared, instead of going down to eat it, they invariably crawl upward, until the top is reached. When the hive is shallow, or the colony fills the frame, they will cross over the frames towards one end, if it is warm enough in the hive for them to do so, but if it is too cold, then they remain and starve. Sometimes they traverse to one end, but woe to them, they cannot live to return to the other end on account of the frost, or frigid temperature within. But, says one, the heat generated by the bees, ascends, strikes the top of the hive, spreads out horizontally, warms the honey at the ends, and thus invites the bees to follow in this direction. Why, friends, how far do you suppose heat of the bees extends horizontally, when it is so cold in the hives as to freeze the slightest vapor—when the temperature outside of the one inch board hive is 25° below zero? Not much heat outside the immediate bodies of bees, surely, unless it be directly above the space of a bee's probosis. Hence, we must devise some plan to keep the interior of the hive in an even temperature of 45° through the winter, or build our hives so that bees may store sufficient honey above the brood nest for their winter's consumption.

Ohio State Bee-Keepers' Convention.

The Ohio State Bee-Keepers' Association will hold a convention during State Fair week, at Columbus, O., commencing on Tuesday evening. The following programme has been arranged:

Tuesday Evening, Sept. 4.—1. Greetings and organization. 2. Annual report of Secretary and Treasurer. 3. Election of officers. 4. Annual address of the President. 5. General discussion of topics presented by members present.

Wednesday Evening, Sept. 5.—1. Address by S. D. Riegel on improvement in bee-culture as deduced from the season's operations, followed by discussion on the same. 2. Question drawer and discussion on topics presented.

Thursday Evening, Sept. 6.—1. Address or general talk by Vice-President Aaron Benedict, on the rearing and management of queens, followed by discussions of the same. 2. Question drawer and discussion of topics presented.

Conference meetings of bee-keepers and those interested will also be held each afternoon at 1 o'clock in Apiarian Hall, on Fair grounds.

The place of meeting of the convention to be decided at time of the Fair, probably in the upper room of Apiarian Hall.

Everybody who is at all interested in bees is invited to meet with the Association, and all who can bring articles for exhibition, as efforts are being made to render this department a grand success.

The State Board of Agriculture has furnished the bee-keepers a separate hall for their exhibits at the State Fair, with an upper room in which to hold meetings. Ample room will be furnished for all exhibits.

DR. H. BESSE, *Pres.*
D. SPEAR, *Sec.*
AARON BENEDICT,
Supt. Apiary Hall.

To the Bee-Keepers of California.

The National Convention has been appointed to be held at Toronto on Sept. 18, 19 and 20. I now call upon the secretaries of the various county associations of this State, and for counties having no association, on any enterprising bee-keeper who will undertake the work, to collect and make out reports for their respective localities of the number of bee-keepers, number of colonies in the spring and on hand, and amount of comb, extracted and strained honey, and of beeswax taken, or estimated to be taken during the season, and to forward them to me by the 6th of September. Send no individual reports except from counties having no association and but few scattered apiaries. I hope to hear from all parts of the State, but unless I get satisfactory reports from the principle honey-producing counties (San Diego, Los Angeles, San Bernardino, Ventura, and Santa Barbara), and within the specified time, I shall send nothing to the convention. The former annual reports, as well as that of Dr. Miller, who, in response to a call for statistics, received only five answers from this State, where there is said to be 600 bee-keepers, have been a mere farce, unsatisfactory to those who undertook the work, and of no practical information to anybody else, and I have no desire to make a repetition in that line. Our object is not to present figures that will astonish the world, but to obtain facts, such as they are, that we may get a clearer insight into the true status of the bee-business at the present day. I can see no good reason for withholding the truth, be it flattering or not, and I hope that each individual bee-keeper will aid the secretaries in their work, by giving or forwarding to them the desired information.

WM. MUTH-RASMUSSEN,
Vice-Pres. for California N.A.B.K.S.
Independence, Inyo Co., Cal.

Ontario Convention.

The third annual general meeting of the Ontario Bee-Keepers' Association will meet in the City Hall, Toronto, on Tuesday, the 20th day of September next, during the second week of the Industrial Exhibition. As the North American Bee-Keepers' Covention meets at the same time and place, it has been arranged that the two bodies hold joint meetings in discussing matters pertaining to our common interests, as the leading bee-keepers of America are to be present. This will, undoubtedly, be the most interesting meeting of apiarists ever assembled in Canada. The venerable Mr. Langstroth and all the prominent bee-men of the United States are expected to be present. A profitable time is anticipated, and a good turn-out requested. The convention will last three days. A meeting for the purely business work of our association will be held sometime during the convention, of which due notice will be given.

R. McKNIGHT,
Pres. Ontario Bee Association.

☞ The S. W. Iowa Bee-Keepers' Association will meet at Red Oak, Iowa, Aug. 29. Members of the society are requested to bring their apiarian implements and put them on exhibition at the fair. Our society is in a flourishing condition, having a membership of 64, and more being added to our number at every meeting. Auxiliary associations are being formed in all our counties, and southwestern Iowa will soon be one of the foremost sections of our country in apiculture. In our report will be given the number of colonies owned in the society, produce, etc.

W. J. OLIVER, *Sec.*
L. E. MERCER, *Pres.*

To Bee-Keepers of North America.

As one of the oldest of your number, I desire respectfully to remind you that the Toronto Convention will afford us all an opportunity of paying a well-earned tribute to the memory of our honored dead—Samuel Wagner, Moses Quinby, Adam Grimm. Richard Colvin and others, who did so much to elevate American apiculture to its present high position.

L. L. LANGSTROTH.

Oxford, Ohio, Aug. 23, 1883.

☞ The Cass County Bee-Keepers' Association, organized on the 15th of August, will meet on the 10th of October, 1883, in Logansport, Ind. All persons interested in bees and honey are respectfully invited to come. DE WITT BROWN, *Sec.*

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Curious Freak of Bees.

I desire Mr. Heddon to reply to this: One of my colonies of bees cast off a swarm in the middle of July, and in order to prevent the second, I cut out all their queen-cells (they were hybrids) and grafted in a cell from an Italian colony, and when cutting out the queen-cells from this hybrid colony, one cell dropped down unnoticed to the bottom of the hive, and in a few days it swarmed again with the young Italian queen, and, on examining the old hive, I found this queen-cell on the bottom, took it out and cut it open, and to my surprise I found a dead worker bee in it, and an old one at that. The mystery to me is, Why did the bees seal that cell with that dead worker bee in it and then swarm. I gave this colony a laying queen, so everything is all right. A. RICKENBACHER.

Gahanna, Ohio, Aug. 15, 1883.

ANSWER.—I have never had a case like the one above referred to. I do not know as we have any precedent of the kind. I do know that it is one of the traits peculiar to the Italians, especially the golden variety, to cast swarms leaving no cells behind. Such acts are exceptional, of course. Sometimes we find worker combs in queen-cells, but they were hatched and grown in the cell, evidently intended by the bees for a queen. Are you sure the bees sealed up this old dead worker before or immediately after the swarming? But, no matter at which time they did it, their reasons for so doing can be hardly more than guessed at by any of us.

SELECTIONS FROM OUR LETTER BOX

Rolling in the Buckwheat Honey.

Last spring we purchased of Mr. Doolittle an Italian business-queen. We reared about 40 queens from her. These young queens were mated in our yard by German drones, and at this date these hybrid bees are just rolling in the buckwheat honey. The weather is all we could wish, and every indication now points to a most bountiful fall harvest.

A. W. OSBURN.

Water Valley, N. Y., Aug. 17, 1883.

Why so Much Extracted Honey.

As there is so much difference in the price of extracted and comb honey, why not produce more comb and less extracted? Will we not get as much honey in the aggregate to use lower stories exclusively for brood and winter stores, and use the section boxes on top of brood frames for surplus honey? I am inexperienced, but expect to "grow up," with the start I have, to considerable of an apiary, and am anxious to know why so much extrated honey.

K. A. W.

East Liberty, Ohio, Aug. 15, 1883.

[Both comb and extracted honey will be in demand, and all can produce which ever they desire, or have the convenience for doing. The extracted honey is used for manufacturing purposes, as well as for table use, instead of syrups, fruit, etc. Both kinds are necessary. Side storing in the brood chamber is practiced by many, but the tendency is towards favoring top storing exclusively.—ED.]

Large Fall Crop Expected.

I have not obtained any honey since the white clover I extracted in June. The bees have been getting enough honey to keep the queens laying all through the summer. They are now working on buckwheat, and the wheat fields are full of bees, working on the ragweed, which is covered with blossoms. The weather has been very dry since the middle of July, but we had a nice rain last week, and another to-day. I expect a big flow of honey between this and the middle of September.

R. GRINSELL.

Baden, Mo., Aug. 22, 1883.

Cleome.

Enclosed please find a plant that grows wild hereabouts. The bees work on it, beginning at daylight. I can, at this moment, see drops of honey in it. Can you name it?

JOHN R. CRAIG.

Beatrice, Neb., Aug. 21, 1883.

[It is Cleome, or the Rocky Mountain bee plant—an excellent honey-producer.—ED.]

Wintering Bees in Texas.

Bees have done well in this vicinity since spring opened. Box hive men lost heavily during the latter part of winter. I put 36 up last fall, 4 of which were weak in stores and bees; to those I gave plenty of honey. by placing full boxes on top of frames, which was soon taken out by robber bees, and the weak colonies were left to starve, which they soon did. I have concluded never to try to winter a weak colony again. I also bought 9 weak colonies in January, which I tried to save by feeding, and succeeded in saving 5 of them. I commenced the spring with 36 colonies, 6 of which were very weak; they have increased to 69 by natural swarming, and I hived back and doubled about 20 swarms, and lost 15 or 20 more. They swarmed incessantly from the first of April to the 12 of July. There was a good honey flow from the 20th of June to the 8th of August; since which time robbing has been "the order of the day." I have been watching the BEE JOURNAL closely to find a plan by which this robbing could be prevented, but have never seen anything that gives satisfaction. It bothers and perplexes me worse than anything I have found in bee-keeping. My bees are mostly blacks; I have never seen an Italian robbing, and have never seen a colony of Italians robbed by other bees. I think I shall Italianize them, next spring, for this quality alone. I have taken, up to date, about 2,000 pounds of comb honey, and everything is favorable for a good fall crop.

B. L. CLEMENTS.

Queen City, Texas, Aug. 20, 1883.

Poorest Honey Crop ever Known.

This has been the poorest summer for bees ever known in Sanilac County, Mich. I commenced with 42 colonies; increased by natural swarming to 77; we had rain and cold up to Aug. 10. White clover was plenty everywhere. Since the August 10, they have been working on sweet clover, still they get but little honey in the boxes. Some of my neighbors have not taken off one box yet. I still hope for the best. JOSEPH LEE.

Farmers, Mich.

Honey Barometer.

I have been wondering if there is interest enough in the country to give short weekly reports from three or four districts in every State, saying what the state of the honey flow is, weather, how bees are working, blooms, etc. In this way we could have a barometer all over the country. The idea adopted in the *British Bee Journal* is what I mean in "Echoes from the Hives." If this thing was arranged for now systematically, it might be worked next year. Another thing, could not sections of States establish honey depots in the nearest cities, receive the honey of the members and grade it, and so help to keep up the price.

R. F. KENDALL.

Austin, Texas, Aug. 20, 1883.

August Dwindling.

Who of the bee-keeping fraternity have had an experience of an August dwindling? Here in southern Ulster county, in eastern New York, on the afternoon of Aug. 16, bees in large numbers lay around my yard unable to reach their hives from being chilled, each laden with honey or pollen. But it so happened to be warm the next day, and they most all revived, though had it rained the following night, which it threatened, they would all have perished.

D. A. MARTIN.

Plattekill, N. Y., Aug. 20, 1883.

Over 600 lbs. from One Colony.

On page 398, BEE JOURNAL, Mr. Knickerbocker states that his "boss colony" has already gathered 145 pounds, with the prospect of getting 175 pounds. My "boss colony" (a full blooded Italian) has already gathered 340 pounds; but my "bosser" one (*an Americanus*) has already gathered 603 pounds, with the prospect of 50 or 100 more. This has been a good year for honey here. The honey flow has been very regular for three months, but is slacking up some now. Our main source of honey is Alfalfa.

J. F. FLORY.

Lemore, Cal., Aug. 16, 1883.

Collecting Sweet Clover Seed.

Bees are doing well here this season. Be kind enough to state in the Weekly BEE JOURNAL the best method of collecting seed from the bokhara or sweet clover.

J. C. THOM.

Streetsville, Ont., Aug. 16, 1883.

Will you please inform me through the Weekly BEE JOURNAL how the seed of the melilot is secured from the stalk, and what it is worth by the quantity?

W. M. HEILIG.

Lutherville, Md., Aug. 23, 1883.

[Its price is regulated by the "supply and demand" in the localities where it is to be sold. To secure it, mow, thresh and screen it, as you would other grain.—ED.]

Honey-Producing Plants.

We are expecting a fine display of honey-producing plants and insects injurious to bees, at the Tri-State Bee-Keepers' Association meeting and Fair. It is prepared by a student of the Michigan University. I am not positive it will be here, but expect it. Prof. Cook has written me in regard to it. The Professor has also given me a invitation to act as chief judge at the Fair at Detroit, and I expect to "obey orders."

A. B. MASON.

Wagon Works, O., Aug. 24, 1883.

"Nothing but Leaves."

In my communication on page 419, where it is said that the caps were nearly all filled with "honey," it should have read nearly all filled with *leaves*. The weather is again cool during the nights, and honey is coming in slowly.

H. S. HACKMAN.

Peru, Ill., Aug. 24, 1883.

Honey Yield in Ontario.

Being desirous of having my bees store surplus honey in the second story of my hives, I determined to remove a couple of sections from the brood-chamber to the upper story, and, in doing so, I was obliged to cut some of the sections apart where they had worked together, and considerable honey ran down to the bottom of the hives, making a condition unsatisfactory to the bees. What are the probable results of such removals? My hives had a strong force of working bees, with the bottom full of honey, and most of the section combs worked together. I had the second story of my hives filled with sections of comb foundation, and yet the bees would not work on the second story. I made this division only three days since, and I now find them working all right with the exception of one hive, on the front of which a large number of bees cluster. This I attribute to the unsettled condition of the bees, caused by cutting the combs, whereby the honey flowed to the bottom of the hive, causing confusion in their working. The yield of honey in this part of Ontario, this season, so far, is far above the average, and bee-keepers anticipate very large results, and well they may, when comb honey, broken up, sells at 15 cents per pound, and one-pound boxes of honey retail at 25 cents per pound; white extracted honey is sold at 12 cents per pound wholesale, and retails at 15 cents per pound. Our bees are principally Cyprians and Italians; very few black bees are to be found, and those who have them are classed among the old fogies.

J. H. PECK.

Trenton, Ont., Aug. 20, 1883.

[The removal of unfinished sections to the upper story is frequently done to induce the bees to work up there, and there will be no trouble to get the bees to clean up the honey; in fact that is, of itself, an inducement for them to store it above.—ED.]

Report for the Season.

I commenced the season with 57 colonies; some of them were by no means strong. They brought in the first pollen on April 2; one month later than usual. My first swarm issued May 18; ten days earlier than last year. It commenced to rain April 30, and continued about five days out of every week, more or less, up to June 22, when it ceased. White clover commenced to bloom the latter part of May; the bees made good use of the time between showers, and at this date the pasture fields are white with bloom. Our favorite linden commenced to bloom the first of July, and lasted for 25 days; it gives a bountiful harvest of fine honey. I sell it readily at my home market, extracted at 10 cents; comb at 15 cents per pound. One-pound sections are a new thing here; a few days ago I put a crate of one-pound sections of beautiful white comb honey in the store; as it was the first they had ever seen, it was admired by many. Bees have swarmed too much here this year. Many wild swarms passed over; one went in the gable end of a dwelling house, at a knot hole in the weather boarding, and they are still working lively.

H. CLARK.

Palmyra, Iowa, Aug. 1, 1883.

Home Markets for Honey.

I said, many years ago, that all the honey produced in the state of New York could be consumed in the State, without taking any of it to our largest cities. This may seem a broad assertion, but let bee-keepers commence, as I did 20 years ago, to dispose of their honey, and I think that they will be convinced that their country and village will consume nearly all of it. The very same families that a few years ago bought but a few pounds, will now take as many dollar's worth; and for the past few years I have had more orders by far than I could fill. Another thing, you are not only creating a home market which will increase as years roll by, but you get the cash; but if it be consigned to the best commission men, time must elapse before you get the pay, say nothing of breaking and many other contingencies. One word of caution: be careful not to try to sell honey of an inferior class for first-class; sell it for just what it is. I never have any trouble to sell it all.

Oran, N. Y. W. P. B.

Queen's Stings, the Clovers, etc.

Two weeks ago, a Holy Land queen stung my wife on the middle finger, while she was daubing her with honey, to return her to hive No. 19, from which she had just emerged with a swarm; and, one day last week, my daughter was assisting me, and while she was preparing to kill a Holy Land virgin queen in hive No. 3, she was stung on the middle finger. My wife and daughter are my main helpers in the apiary, and they have handled hundreds of queens, and were never stung by one before. The stings were painful; both queens retained their stingers and are now doing splendidly. My 5 acres of buckwheat are in full bloom, and the bees are on it from daybreak till noon, and are on the sweet and red clovers all day. The bees are not now working on the white clover, but very little. The figwort and catnip are blooming, and dotted thick with bees from early until late. My Black-Italians (hybrids) do not work on red clover. My Syrio-Italians draw the nectar from the red clover bloom, easily and quickly. The queens all had a vacation some three weeks back, but now they are at the front, booming. The honey is the finest I ever saw. The prospects are yet splendid in favor of a fall honey harvest. We have had no rain now for ten days, and to-day it is 94° at 1 p. m.; wind northwest. I keep my 51 colonies all equal and full of bees; when one gets so full that they cannot be smoked in, to stay and work, I find the weakest hive, and, late in the evening, I shovel them up and take them to that hive and smoke them in.

Kane, Ill. R. M. OSBORN.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the Bee Journal.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

How to Create a Market for Honey.

We have now published another edition of the pamphlet on "Honey as Food and Medicine," with more *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy **5** cents, postpaid; per dozen, **40** cents; per hundred, **$2.50.** 500 will be sent postpaid for **$10.00**, or 1,000 for **$15.00**. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit. Try it, and you will be surprised.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a statement of account every week.

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1 year, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with $6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For four subscribers, with $8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with $10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly Bee Journal for one year.

To get any of the above premiums for the Monthly Bee Journal send double the number of subscribers, and the same amount of money.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
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The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

BUSINESS CHANGE.—I wish to announce a change in my business. You are aware of the death of my oldest son, which occurred in May last. He had been quite a help to me. After his health was impaired, he went to the country, and I had become accustomed to miss his assistance in the business; but he had taken upon himself the care of the farm. When I found that there was no remedy for his unfortunate disease, my mind was made up to reduce my business. My grocery and seed trade was unusually heavy the past spring and summer, while my honey trade kept growing steadily. When the rush for supplies was added, I was crowded more than was pleasant. I could take no time to write a postal card, unless it was imperatively necessary. On Monday last I rented my store, etc., to a couple of young business men, and sold them my stock of groceries. I may be found, hereafter, in my honey store, on the corner lot opposite the old store. Pure Honey and Bee Keepers' Supplies, Seeds and Pure Baking Powder, will hereafter be my business.

Chas. F. Muth.

Cincinnati, O., Aug. 22, 1883.

Emerson Binders—made especially for the Bee Journal, are lettered in gold on the back, and make a very convenient way of preserving the Bee Journal as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN.

Editor of the Weekly Bee Journal.

925 West Madison Street, Chicago, Ill.

Mrs. J. F. Upton gives the following notice of this book in the Bath, Maine, *Sentinel*:

A guide to the management of the apiary for profit and pleasure, by Thomas G. Newman. This work is designed to initiate beginners in bee-keeping in all the secrets of successful bee-culture. Beginning with the different races of bees, the author takes his readers along step by step, carefully explaining the different kinds of bees, illustrating each kind with the eggs and brood, explaining the terms used, the production of wax and comb, and the work done by these wonderful insects. The establishment of an apiary is next considered; the best location, time to commence, how many colonies to begin with, what kind of bees to get, how to care for a first colony, keeping bees on shares, changing the location, all of which it is indispensable for a beginner to know. It is also important to know which kind of hive is the best, how to procure the best comb honey, how to procure it for market, how it should be marketed, what to do with candied comb honey, and how to extract honey. The scientific management of an apiary is then entered into, and illustrations of all the necessary applicances introduced. There is a chapter devoted to the honey extractor and its use, and another to comb foundation and its use. The various honey-producing plants and trees are named and illustrated. Various methods for exhibiting bees and honey at county and state fairs are described. The best and safest plans for wintering bees are discussed, the book closing with some general advice to beginners. The author says of his book on Bees and Honey, "it was not designed to supersede or supplant any of the valuable works on apiculture already published, but to supply a want for a cheap work for the beginners." We most cordially recommend this work not only to beginners, who will find it invaluable, but to all who are not already familiar with the lives and movements of these industrious and intelligent little workers. The information to be gained as to their habits, manner of breeding, intelligence, energy and wonderful instincts, by reading this book alone, is enough to make one regard the bee with admiration and amazement.

PRICE—Bound in cloth, **75 cents**; in paper covers, **50 cents**, postpaid.

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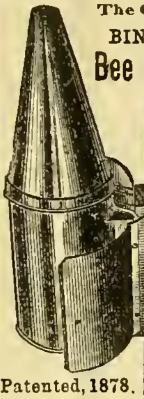

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CYPRIANS CONQUERED. — All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's "Conqueror Smoker" did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham.
G. M. DOOLITTLE.
Borodino, N. Y., Aug. 15, 1882.

EXCELLING ALL.—Messrs. Bingham & Hetherington, Dear Sirs:—I am now selling your Smokers almost exclusively. You are excelling yourselves in smokers all the time.
Respectfully,
J. G. TAYLOR,
Austin, Texas, May 10, 1883.

THE VERY BEST.—The Bingham "Conqueror" Smoker is the very best thing I have tried in that line.
M. M. LINDSAY.
Fulton, Tenn., July 24, 1883.

◆

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The "Doctor"..	(wide shield)—3½	in. fire tube,	$2.00
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With thanks for letters of encouragement, and the absence of complaining ones, we tender to our thirty-five thousand patrons our best wishes.
Very Respectfully Yours,
BINGHAM & HETHERINGTON.
Abronia, Mich., June 1, 1883.

☞ Do not send coins in a letter. It is dangerous and increases the postage unnecessarily. Always send postage stamps, for fractions of a dollar, and, if you can get them—*one-cent* stamps; if not, any denomination of postage stamps will do.

◆

☞ The new two-cent postage stamp is to be of a metallic red color, with a vignette of Washington. It will supersede the present three-cent stamp on the 1st of October.

◆

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Trial Trip—25 Cents.

As the season for Fairs has arrived, and wishing to be able to reach several thousands of the old-fashioned bee-men, and by the aid of the BEE JOURNAL to lift them up to higher ground, adopting newer methods and progressive ideas, we make the following very liberal offer: We will send the Weekly BEE JOURNAL *three months on trial, for 25 cents.* In order to pay for getting up Clubs, we will give a copy of Fisher's Grain Tables, or Scribner's Lumber and Log Book, to any one who will send us five trial subscriptions (with $1.25); for a club of *ten* we will give a cloth copy of Bees and Honey; for a club of 15, a cloth copy of the 7th edition of Cook's Manual of the Apiary; for a club of 25, we will present both the Manual and Bees and Honey. If any one wants these Books for nothing, here is an excellent opportunity to get them for a little exertion.

◆

Books at Fairs.—Those who make an exhibit at Fairs will find that an assortment of Books and Pamphlets would sell and leave them a profit for handling. We will send such, postage prepaid, at 25 per cent. discount; or if the purchaser pays express charges, we will supply any of our own publications at 40 per cent. discount.

◆

☞ The new Postal Note will be obtainable in a few days at the Post-offices all over the country. Then any sum from one cent to five dollars can be sent in a letter, by obtaining a Postal Note, costing only 3 cents. After October 1, small sums can be easily sent to this office for 5 cents (3 cents for the Postal Note and 2 cents postage on the letter), and there will be no need of sending postage stamps in letters, which often get all stuck together by the damp weather, or being handled while perspiring.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

◆

☞ A Queen and a book on Queen-Rearing for $2. See Henry Alley's liberal offer in his new advertisement.—*Adv.*

◆

☞ Do not let your numbers of the BEE JOURNAL for 1883 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

The Bee-Keeper's Guide;

OR,

MANUAL OF THE APIARY,

By A. J. COOK,

Of Lansing, Professor of Entomology in the
State Agricultural College of Michigan.

—:o:—

320 Pages; 133 Fine Illustrations.

—:o:—

This is a new edition of Prof. Cook's Manual of the Apiary, enlarged and elegantly illustrated. The first edition of 3,000 copies was exhausted in about 18 months—a sale unprecedented in the annals of bee-culture. This new work has been produced with great care, patient study and persistent research. It comprises a full delineation of the anatomy and physiology of the honey bee, illustrated with many costly wood engravings—the products of the Honey Bee; the races of bees; full desccriptions of honey-producing plants, trees, shrubs, etc., splendidly illustrated—and last, though not least, detailed instructions for the various manipulations necessary in the apiary.

This work is a masterly production, and one that no bee-keeper, however limited his means, can afford to do without. It is fully "up with the times" on every conceivable subject that can interest the apiarist. It is not only instructive, but intensely interesting and thoroughly practical.

—:o:—

Read the following opinions of the Book;

All agree that it is the work of a master and of real value.—*L'Apiculture*, Paris.

I think Cook's Manual is the best of our American works.—LEWIS T. COLBY.

It appears to have cut the ground from under future book-makers.—*British Bee Journal.*

Prof. Cook's valuable Manual has been my constant guide in my operations and successful management of the apiary.—J. P. WEST.

I have derived more practical knowledge from Prof. Cook's New Manual of the Apiary than from any other book.—E. H. WYNKOOP.

This book is just what everyone interested in bees ought to have, and which, no one who obtains it, will ever regret having purchased.—*Mich. Far.*

To all who wish to engage in bee-culture, a manual is a necessity. Prof. Cook's Manual is an exhaustive work.—*Herald*, Monticello, Ill.

With Cook's Manual I am more than pleased. It is fully up with the times in every particular. The richest reward awaits its author.—A. E. WENZEL.

My success has been so great as to almost astonish myself, and much of it is due to the clear, disinterested information contained in Cook's Manual.—WM. VAN ANTWERP, M. D

It is the latest book on the bee, and treats of both the bee and hives, with their implements. It is of value to all bee-raisers.—*Ky. Live Stock Record.*

It is a credit to the author as well the publisher I have never yet met with a work, either French or foreign, which I like so much.—L'ABBE DU BOIS, editor of the *Bulletin D' Apiculteur*, France.

It not only gives the natural history of these industrious insects, but also a thorough, practical, and clearly expressed series of directions for their management; also a botanical description of honey producing plants, and an extended account of the enemies of bees.—*Democrat*, Pulaski, N. Y.

We have perused with great pleasure this *vade mecum* of the bee-keeper. It is replete with the best information on everything belonging to apiculture. To all taking an interest in this subject, we say, obtain this valuable work, read it carefully and practice as advised.—*Agriculturist*, Quebec.

This book is pronounced by the press and leading bee-men to be the most complete and practical treatise on bee-culture in Europe or America; a scientific work on modern bee management that every experienced bee-man will welcome, and it is essential to every amateur in bee-culture. It is handsomely printed, neatly bound and is a credit to the West.—*Western Agriculturist.*

This work is undoubtedly the most complete manual for the instruction of bee-keepers which has ever been published. It gives a full explanation regarding the care and management of the apiary. There is no subject relating to the culture of bees left untouched, and in the compilation of the work Prof. Cook has had the advantage of all the previous knowlede of apiarists, which he uses admirably to promote and make popular this most interesting of all occupations.—*American Inventor.*

—:o:—

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OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

VOL. XIX. CHICAGO, ILL., SEPTEMBER 5, 1883. No. 36.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

☞ The Editor of the BEE JOURNAL was prevented from attending the Kentucky State Convention, last week, by an attack of nervous prostration. His physician prescribes rest from brain labors as much as possible, for a few weeks, in order to effect a complete restoration.

☞ The Rev. L. L. Langstroth has been invited to attend the Northwestern Bee-Keepers' Convention to be held at Chicago, Oct. 17 and 18, and accepts in the following language:

"About the invitation to attend the Convention at Chicago, and your very kind invitation to me to share your hospitalities, friend Newman, allow me to say, I accept both with great pleasure, and if nothing unforeseen should prevent, I will be glad to make the personal acquaintance of the Northwestern bee-keepers.

L. L. LANGSTROTH."

☞ Conventions and Bee and Honey Shows are now the order of the day, and every bee-keeper should arrange to attend these helps to our pursuit, and thus aid in every way possible the advancement of the art. By looking over the columns of the BEE JOURNAL the times and places of such meetings can be ascertained, and arrangements made ahead, so that all may attend them.

☞ The new two cent rate of, postage for letters goes into effect on October 1. Three cent postage stamps will then be but little used. For all fractions of a dollar sent to us hereafter we should prefer either *one-cent*, or else five or ten-cent postage stamps. Do not send coins in any letter.

Honey Yield in Wisconsin.

The following items are from the Milwaukee *Sentinel* of last week:

Mr. Crain, the owner of a large number of bees at Tyron, in Dunn county, reports an extraordinary yield of honey this season, owing to the unlimited stretches of clover fields. The apiarists of Eau Galla, Waubeck, in that county, are also highly gratified with the results of the season.

James Nipe, at Spring Prairie, says his bees have stored over 10,000 pounds of honey so far this season. It has been a very good year for white honey, as clover was in blossom much longer than usual.

E, A. Morgan, of Columbus, shipped 1,000 pounds of honey to Eau Claire last week, his third shipment to that point, this season. The price received was 20 cents a pound.

T. L. Wolfenden, of Lake Geneva, recently sold 6,000 pounds of honey to a Cincinnati firm.

☞ Excursion tickets from Cincinnati to Niagara Falls, good until Oct. 28, can be bought for $15. Excursion tickets from any part of the South or Southwest to the Louisville Southern Exposition can be had, or from Louisiville or Cincinnati Exposition. In this way, if in no other, Toronto, which is only 30 miles from Niagara Falls, may be reached cheaply.

☞ The Summer and Fall Catalogue of E. P. Roe, Newburgh, N. Y., is received. It consists of 20 pages, and describes small fruit plants and grape vines.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey* at Fairs, will sell almost a fabulous quantity of it.

Bee-Keeping in Arkansas.

The Little Rock, Ark., *Gazette* contains the following:

Apiculture or bee raising has become a great business in Devall's Bluff, and Dr. W. W. Hipolite, who is accredited with being the pioneer apiculturist in the State, carries it on extensively. Not the Doctor exactly, but by his son, Walter H. The Doctor supervises matters, however, and there are few who are better versed in the natural history of the bee than he. He has 58 colonies, or as they are sometimes called, hives, and although the season does not close until November, he has gathered 3.000 pounds of honey, a great part of which he sends to Little Rock and Hot Springs. The Doctor intends to send some fine specimens of honey in the comb and extracted honey to the Louisville Exposition. A. W. Sory, another apiculturist, has gathered 5,000 pounds this season, and carries on an extensive business. It has been stated by good authority that Arkansas honey stands second to none, and that the State is one of the best locations in the Union for successful operations in apiculture.

☞ A fight recently occurred in Virginia City between a cat and a hive of bees, in which the bees got decidedly the best of it. The cat's attention was attracted by the bees, and thinking them some new kind of game, dabbed viciously at them as they passed in and out of the hive. At last, one day the bees got angry and poured out of the hive by the hundred, and darted for the fur of tabby. The cat rolled herself into a ball, and bit, sputtered, and clawed with all her might, but with no effect, as the bees kept stinging as diligently as ever. After a time she was taken away, and was a week recovering from the effects of the stings. She cannot be persuaded to go near the hive any more.

Fairs.—To any one exhibiting at Fairs, we will send samples of the BEE JOURNAL and a colored Poster, to aid in getting up a club. The Premiums we offer will pay them for so doing. For a club of 8 subscribers to the Monthly BEE JOURNAL, or 4 Weekly, we will present Dzierzon's Rational Bee-Keeping, price $2.00.

Immense Yield of Honey.

The Chenango, N. Y., *Tribune* of Aug. 18, contains the following concerning an immense yield of honey in the apiary of Mr. F. E. Smith, of Chenango, N. Y.:

> One of the grandest sights we ever beheld in connection with a display of bees and honey has been witnessed by large numbers of people who have lately visited Sunny Side apiary, located in this village, and owned by E. F. Smith.
>
> On the first of May last, Mr. Smith commenced the season with 30 colonies of bees, mostly Italians and Cyprians, in improved Langstroth frames adapted to winter chaff-packing hives, having lost 7 during the winter and early spring.
>
> The early maple and apple blossoms placed the colonies in fair condition, and the first swarm (Italians) issued May 26, in the midst of apple bloom. White clover was abundant, and commenced blooming about the 10th of June, but owing to excessive rains very little nectar was secreted during that month, and consequently the bees did very little up to July 10. After that time they commenced to boom, and upon the opening of basswood blossoms (about July 21), they fairly outdid themselves, and from that time onward until Aug. 10, with very little interruption, honey seemed to rain down. Many of the colonies being so numerous as to bring in upwards of 20 pounds in one day.
>
> A record was kept of 2 colonies which we give below. For convenience we will number them 1 and 2. For further convenience we will name the parent colony of No. 1, "B," the first swarm "A," and the two-frame nucleus "C." All being the outcome of No. 1 colony without any outside help except that frames of foundation were supplied fast as needed.
>
> *Record of colony No. 1, and its increase.*
>
> | | A | B | C |
> |---|---|---|---|
> | June, capped honey.....lbs. | 28 | 8 | |
> | " extracted honey...... | | 4 | |
> | July 1, capped honey...... | 26 | | |
> | " 18, extracted honey.. | 30 | | |
> | " " capped honey.... | | 16 | |
> | " 25, extracted honey.. | 49 | 31 | |
> | " 27, " " .. | 47 | 30 | |
> | " " capped honey.... | | | 19 |
> | " 30, " " .... | 6 | | 12 |
> | " " extracted honey.. | 53 | 42 | |
> | Aug. 2, extracted honey... | 54 | 38 | |
> | " 3, capped honey .... | | | 16 |
> | " 6, extracted honey... | 56 | 43 | |
> | " 9, " " ... | 58 | 42 | |
> | " " capped honey.... | | | 8 |
> | " 13, extracted honey.. | 30 | 15 | |
> | Total...............lbs. | 437 | 269 | 55 |
>
> Summary No. 1, "A," 437; summary No. 1, "B," 269; summary No. 1. "C," 55; total No. 1 and increase, 761.
>
> "C" has also 28 one-pound boxes nearly filled, and Mr. S. expects to get at least 50 pounds of fall honey each from "A" and "B." If he succeeds, this will bring the amount from the one colony and increase up to nearly 900 pounds. Of the above 139 pounds is comb honey in one-pound boxes, the remainder, 622 pounds, extracted. Reckoning comb honey at 20 cents per pound, and extracted at 15 cents, the result is as follows:
>
> 622 pounds of extracted honey, at 15 cents, $93.30; 139 pounds of comb honey, at 20 cents, $27.80; add for 20½ pounds of comb honey, at 20 cents, "C," $4.10; add for 1 pound of wax, 30 cents; 1 new swarm of bees, $8; 1 nucleus swarm of bees, $7; total profits No. 1 colony and increase to date, $140.50.
>
> *Record of No. 2 colony alone.*
>
> | | |
> |---|---|
> | June, capped honey............lbs. | 30 |
> | " extracted " .... | 33 |
> | July 18 " " .... | 20 |
> | " " capped " .... | 32 |
> | " 25 extracted honey.......... | 55 |
> | " 28 " " .... | 53 |
> | " 31 " " .... | 51 |
> | " " capped " .... | 18 |
> | Aug. 3, extracted " .... | 49 |
> | " 7 " " .... | 51 |
> | " 9 " " .... | 42 |
> | " 13 " " .... | 24 |
> | " 14 " " from extra frames below except brood-nest of eight frames.................. | 34 |
> | Total.......................lbs. | 492 |
>
> Here we have a grand total of over *twelve hundred and fifty pounds* of honey worth *over two hundred dollars*, from two colonies of bees in the spring.
>
> One colony, which we will call No. 3, has given no honey or increase. This colony was queenless on the first of June, with only a handful of bees. A queen-cell, and a small patch of brood and eggs were added from another colony, and they are now strong, well along in the boxes, and will give a good showing.
>
> Consequently, what honey has been taken off, was taken from 29 colonies, spring count. No honey was extracted from the brood-chamber. Over 6,000 pounds of honey has been taken to date, and there is over 700 one-pound section boxes on the hives well along, and Mr. S. believes he will get *one thousand pounds more* this season. This is probably the largest honey yield on record, being that over 20 per cent. of the above is comb honey in one-pound section boxes.
>
> Sunny Side apiary can be seen by calling on the proprietor, who is thoroughly conversant with the business, and takes pride in showing his tons of honey. We have spent some time, and have taken considerable pains to get at these figures, and can vouch for all we have said. Incredible as the above report may seem to some, who know little of bees and their industry, it is true, nevertheless, and can also be substantiated by Rev. A. Eastman, of this village, who has been in attendance at Sunny Side apiary during the honey season; and by many of our citizens who have made frequent visits there. People come many miles to see this wonderful apiary and get the honey.
>
> Many old bee-keepers who are now using the box hive of the Pilgrim fathers, are taking notes on the standard Langstroth movable frame outdoor wintering, chaff-packing hive now used by Mr. S., and also of his superior strains of Italian and Cyprian bees for future reference.

In the meantime we congratulate friend Smith on having obtained what is probably the greatest honey yield on record from 29 colonies of bees, spring count. He now has 66 colonies in prime condition.

Notice to Iowa Bee-Keepers.

Quite a large number of bee-keepers in our State have expressed a desire for the formation of a State Association. A consultation with others has resulted in the decision not to attempt to hold a meeting during the coming State Fair, but if thought best to hold one during the time of the meeting of the State Agricultural Society at Des Moines next January. All bee-keepers who may be present at the Fair are earnestly requested to report to the Rev. O. Clute, at the Apiarian Exhibit, on or before 1 p. m. of Tuesday, the 4th day of September, 1883, who will give them notice of a meeting for consultation, and also for the selection of a committee of arrangements if one is deemed necessary.

O. O. Poppleton,
Vice-Pres. N. A. B. K. Society.
Williamstown, Iowa, Aug. 10, 1883.

Reduced Fare to Toronto Convention

President D. A. Jones, under date of Beeton, Aug. 25, 1883, writes us as follows:

> I have received a letter, of which the enclosure is a copy, from Mr. Hill, Manger of the Toronto Industrial Exhibition, which is the outcome of an application which I made to him to secure reduced rates for bee-keepers in the State of Michigan. As it would receive publicity through your Journal, perhaps you will be kind enough to give it insertion. There are single fare rates for the whole week of our convention.
>
> D. A. Jones.
>
> Beeton, Aug. 25, 1883.
>
> H. J. Hill, Esq.—*Dear Sir:* Replying to yours of the 15th inst., I would say that we do not wish to advertise any reduction from regular rates, but if there are any on our line who apply to you, and you will refer the application to me, I will furnish them with certificates on which they can obtain tickets to Port Huron or Detroit, and return at excursion rates.
>
> Yours truly, D. Edwards.

☞ "A tired bee," says Sir John Lubbock, "hums on E, and, therefore, vibrates its wings only 380 times in a second." A brisk little bee humming on A will, on the other hand, increase its vibration to 440 per second.

Local Convention Directory.

1883. *Time and Place of Meeting.*

Sept. 4.—Ohio State, at Columbus, O.
D. Spear, Sec.

Sept. 4.—N. W. Ill., & S. W. Wis., at Ridot, Ill.
Jonathan Stewart, Sec.

Sept. 12.—Eastern Indiana, at Richmond, Ind.
M. G. Reynolds, Sec., Williamsburg, Ind.

Sept. 12-14.—Tri-State, at Toledo, Ohio.
Dr. A. B. Mason, Sec., Wagon Works, O.

Sept. 18-20.—North American, at Toronto, Ont.
A. I. Root, Sec., Medina, O.

Oct. 9, 10.—Northern Mich. at Sheridan, Mich.
O. R. Goodno, Sec., Carson City, Mich.

Oct. 10.—Cass County, at Logansport, Ind.
De Witt Brown, Sec.

Oct. 17, 18.—Northwestern, at Chicago, Ill.
Thomas G. Newman, Sec.

Oct.—Northern Ohio, at Norwalk, O.
S. F. Newman, Sec.

Dec. 5-6, Michigan State, at Flint.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

◆

Robber Bees and Robbing.

Dr. W. G. Phelps, D. D. S., gives the following in the *Practical Farmer* on the above subject:

One of the most annoying features of bee-keeping, at this season of the year particularly, is that arising from the presence of robber bees. These are in no respect a distinct race of bees, as some erroneously suppose from their peculiar black glossy appearance and active movements. They are simply bees with perverted theivish tendencies. In times when the bee pasturage is scarce they become very troublesome, and much damage and commotion may be caused in an apiary by their persistent attacks on weak hives.

Robber bees may be found in all apiaries, but more particularly in the one whose owner is careless in leaving honey exposed, or daubing sweets about. The propensity to rob seems to gradually develop itself in some bees, and even in whole colonies frequently until leaving the pursuit of honest, hard working honey gatherers, they develop a perfect mania for preying upon the gathering of other bees. No longer satisfied to gather it in minute particles "from every opening flower," they seek it after a wholesale style, from the well-filled hives of their neighbors. Thus they may be found sneaking about the entrance of other hives, endeavoring to slyly gain an admittance. If successful in passing the guards and loading up, they will soon return and bring their comrades, until at last with fierce onslaught and overpowering numbers they take forcible possession, seize upon, and transfer the stores therein to their own hive. The taste once formed, without diligent care, a whole apiary may be demoralized.

As a preventive, where the clover and basswood honey flow is over, it is best to close up the entrances of the hives, particularly the weaker ones, so that but one bee can gain entrance at a time. Thus each hive can be better defended by its owners. In case of robbing having begun, it is well to stand a broad board close up before the entrance around which the robbers shall have to pass ere getting in. If they still persist, close the entrance entirely for a half hour and dash water upon the robbers that gather at the entrance. It may be, if they still attack it, that the hive will have to be moved to a new stand, or into a cool dark cellar until after sundown, and then taken back. By sprinkling flour on the backs of the robber bees, their hive can readily be ascertained, and I have frequently interrupted and broken up their naughty tricks by giving them a good smoking with the bellows smoker, which frightens them into remaining at home. To get ahead of robber bees when once started, the owner must be up by time in the morning, and closely watch them till after dark. Their propensity to squeeze into the smallest crevices after forbidden sweets (which gives them their glossy black appearance), requires a watchful eye to be kept upon them and a careful closing of hives and handling of sweets in their vicinity.

◆

Western Bee-Keepers' Association.

The first annual meeting of the Western Bee-Keepers' Association will be held at Independence, Mo., Sept. 20 and 21, 1883. The association being situated in the centre of one of the best honey-producing sections of the country, and easy of access from all parts of the country, it is desirous that as many bee-keepers as can possibly attend will meet with us, and help to make it as interesting and enjoyable as circumstances will permit. In connection with the general business of such meetings, the members of the association have made arrangements for a Bee and Honey Fair, free to the world. The following premiums are offered. Members of the association will not compete for premiums offered by itself.

By the Association.

Best display of honey (comb and extracted) not less than 20 lbs. of each, in marketable shape	$25 00
Best 25 lbs. of comb honey.....	10 00
" " " extracted "	10 00
Best queen, with her bees......	10 00
Best display of apiarian implements, including all the principle fixtures used in the apiary........................	15 00

Special Premiums free to all.

By the business men of Independence: Best 50 lbs. of comb honey in the best marketable shape, $50.00.

By the *Sentinel:* Best package of comb honey not over 2 lbs., one year's subscription.

Judges not members of the association: All articles for display or premiums must be entered on the first day of the meeting.

Parties from a distance, who may wish, can consign their goods to either of the members of the committee. The members of the association will do their very best to provide entertainment for all persons who may visit us.

J. D. Meador,
L. W. Baldwin,
C. M. Crandall,
James A. Jones,
P. Baldwin.
Committee.

◆

Honey and Beeswax Market.

Office of American Bee Journal,
Monday, 10 a. m., Sept. 3, 1883.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—The demand for extracted honey is exceedingly dull; for comb honey, only fair; arrivals are plentiful. Stocks are large in the hands of corn merchants and others. Our own supply is larger than ever, and, for the present, we cannot compete with commission merchants. We may have to offer lower figures. Our prices so far were 7@9c. for extracted, and 14@16c. for comb honey on arrival.

BEESWAX—Arrivals of beeswax are good at 25@28c., and the demand is fair.

Chas. F. Muth.

NEW YORK.

HONEY—We take pleasure in quoting the following prices on honey, obtainable in our market: Fancy white clover, 1 lb. sections (no glass) 20@21c; fancy white clover, 2 lb. sections (glassed) 18@20c; fair white clover, 1 and 2 lb. sections (glassed) 16@17c.; fancy buckwheat, 1 lb. sections (no glass) 15c.; fancy buckwheat, 2 lb. sections (glassed) 13@14c.; ordinary buckwheat, 1 and 1 lb. sections (glassed) 11@13c.; extracted clover honey in kegs or barrels 9@10c.; extracted buckwheat honey in kegs or barrels 7½@8c.

BEESWAX—Prime yellow beeswax 31@33c.

H. K. & F. B. Thurber & Co.

CHICAGO.

HONEY—Sales are restricted to the present needs of dealers, nearly all of them expect lower figures, and are refusing to buy, unless large concessions from present prices are given them. 1 lb. sections well-filled, 18c.; 1½ and 2 lb. sections, 16@17c. None but white is being taken. What is offered of last year's crop is unsalable at over 5@6c. per pound. Extracted, 7@10c.

BEESWAX—30@35c. for prime to pure yellow.

R. A. Burnett, 161 South Water St.

SAN FRANCISCO.

HONEY—Receipts were comparatively large the past week, mostly of medium qualities, for which the market is not firm. Transfers are largely of a jobbing character. White to extra white comb, 16@20c.; dark to good, 10@13½c.; extracted, choice to extra white, 7½@8½c.; dark and candied, 6½@—

BEESWAX—Wholesale, 27@28c.

Stearns & Smith, 423 Front Street.

ST. LOUIS.

HONEY—Quiet sale. New comb 14@15c.; fancy small packages higher; strained and extracted 7@7½c.

BEESWAX—Easy, at 24@25c. for choice.

W. T. Anderson & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—New honey continues in good demand at 18@19c. for choice 1 lb. sections, and such are readily placed as fast as received; 2 lbs. not so active, at 16@18c. Second quality sells 14@17c. Extracted not in demand.

BEESWAX—None in Market.

A. C. Kendel, 115 Ontario Street.

BOSTON.

HONEY—We have had a shipment the past week from J. E. Crane, and a good sized shipment from J. V. Caldwell, of Cambridge, Ill., whose honey we had last year.

We quote our market prices, as follows: White clover, one lb. combs 20@22c; white clover, 2 lb. combs 18@20c.; extracted, 9@10c.

BEESWAX—Our supply is gone; we have none to quote.

Crocker & Blake, 57 Chatham Street.

◆

☞ According to the American Newspaper Catalogue of Edwin Alden & Bro., Cincinnati, Ohio, just published, containing over 800 pages, the total number of Newspapers and Magazines published in the United States and Canada is 13,186 (showing an increase over last year of 1,028). Total in the United States, 12,179; Canada, 1,007. Published as follows: Dailies, 1,227; Tri-Weeklies, 71; Semi-Weeklies, 151; Weeklies, 9,955; Bi-Weeklies, 23; Semi-Monthlies, 237; Monthlies, 1,324; Bi-Monthlies, 12.

CORRESPONDENCE

For the American Bee Journal.

Excessive Humidity in Winter.

DR. G. L. TINKER.

Mr. S. Corneil, on page 405, of the BEE JOURNAL, gives a highly interesting table on the comparative temperature and humidity of the winter of 1880-81 with the winters of other years. The record is complete from 50 stations in the northern and western States, and in a large number extends over a period of 13 years. For these records he is indebted to our Chief Signal Service Officer at Washington, to whom bee-keepers generally are under obligations for the time and labor of preparing them.

The table indicates beyond peradventure that severe and protracted cold conjoined with an unusual humid state of the atmosphere were the chief causes of the great bee mortality of the late hard winter.

It so happened that throughout the greater part of the eastern States, including New Jersey and Maryland, that the rate of the mortality was much less than at points farther west. In the State of Maine, as indicated by the table, the cold was not below that of average winters, while the humidity was somewhat less. Mr. Plummer, of Augusta, wrote: "We have not had much snow, which all left about the 1st of March." After stating that in his vicinity there were lost only 3 out of 119 colonies, he added: "I think that this is a good report for a locality so far north." And such was the tenor of nearly all the reports from the New England States. Mr. Alley reporting: "Bees never wintered better in this vicinity." There was not the usual snow fall in the eastern States, but the middle States, and the great West were deluged with snow from the 1st of December, 1880, to the 15th of April, 1881. So long as the snow did not melt to any great extent, the bees did not appear to suffer.

When February came in the temperature began to moderate and the snow to melt. The atmosphere became damp, and continued unusually damp all through March in all of those sections where there had been heavy snow falls. Now came the struggle for existence to the bees. February witnessed a frightful mortality, but in March it became appalling. Whole apiaries were swept out of existence, and when at last summer came, less than half of all the bees in the northern States remained alive.

The table of Mr. Corneil indicates what might have been suspected, viz.: that when so great a fall of snow occurs, extending over a great part of the country, we are certain to have a very damp atmosphere during the early spring, and, consequently, an unfavorable condition for bees. It indicates, moreover, what the great majority of bee-keepers have long felt, but have been unable to prove, viz.: that in winter excessive dampness in the hive, or in the atmosphere outside, is the most dangerous thing that can menace a colony of bees. For it appears that cold alone is not injurious to bees, nor is protracted confinement under favorable conditions. Nor yet is their normal food (honey and pollen) injurious, if the quality is good. These facts, at the present time, are indisputable. If then, dysentery be the disorder from which so many colonies of bees succumb in winter, we are forced to the conclusion that dampness is the principal cause of it.

THE POLLEN THEORY.

It is Mr. James Heddon, I believe, who has the distinguished honor of being the author of this theory which occupied to a great extent the columns of the BEE JOURNAL not long since. The agricultural press took up the refrain as if the majority of bee-keepers acquiesced in the strange doctrine, until the general reader has been led to believe that a food provided by nature for the bees is a deadly thing for them to eat in winter.

Mr. Heddon also holds parentage to the "bacteria theory," on which he was "ten to one" for a long time. Well, now, if he had only just stuck to this, his first ideal offspring, he would to-day have been standing upon solid ground, as to the probable cause of many cases of bee dysentery that have occurred in isolated apiaries or in apiaries in certain limited portions of the country.

Now, that the germ theory of disease is quite generally accepted by the most learned men of the times, it seems probable that a specific microphyte may gain entrance to the bodies of the bees by means of their food, or in some other manner, and cause dysentery. But no germ theory can be made to account for the mortality of bees in the winter and spring of 1881. If that winter had been mild, with little snow fall, and there had been great mortality, such a theory might be entertained. But neither can the pollen theory be made to so account.

As stated once before in the columns of the BEE JOURNAL, I am unable to see how the eating of pollen in winter can be a cause of dysentery in any of its forms. If it were claimed that the eating of aphide honey was a cause of some cases, the hypothesis would have at least the merit of reasonableness. But to assume that pollen, a normal food, may cause it, is quite unintelligible.

My belief is, that bees in a normal condition eat pollen all winter, not to any great extent it is true, because much nitrogenous food is not required in a comparatively inactive condition. If bees can be wintered, as they often are, without a flight for five or six months, and come out healthy, I think it must be just as difficult for others to see how pollen may cause the disease.

In the early spring of 1881, I had two hybrid colonies that had failed to gather as much honey the previous fall as my Italian colonies, and about the 1st of March, they became short. They were discovered in time to save both from starvation by the great number of bees that were observed crawling slowly out of their hives as if very sick. Although quite cold, I opened both hives and found that they had no honey, and that they had eaten nearly all their pollen up also, as judged by the marks of their mandibles on the little pollen left. I put unsealed honey over each, and the apparently sick and dying soon revived. About four weeks afterwards they were able to take a flight. They had been gorged with pollen, but had not a sign of dysentery. If the consuming of much pollen was a cause, why did not these bees get it? But instances of this kind have been numerous.

It appears that Mr. Heddon thinks that because some colonies prepared for winter with no stores but cane sugar syrup, seem to winter better than other colonies having natural stores, the pollen theory is demonstrated. I would inquire, why not think the honey to be the cause instead of the pollen? Both being the normal food of the bees. If a child should take *cholera infantum* and die, who had taken no nourishment but milk and bread of good quality, both being normal food, would I be justified in assuming that it was the bread or the milk that caused the disease, or neither? I think I hear a common answer, neither. And so with the causation of bee-dysentery, it is neither the honey or the pollen, if of ordinary good quality.

If it can be proved (which I very much doubt) that bees will winter better on cane sugar syrup than upon their natural stores, it would demonstrate only this, that they are able to hold out longer against adverse conditions upon the former food than the latter, not that either kind of food in any case can be a cause. For instance, a man insufficiently protected and exposed to the intense cold of the Arctic regions will survive longer on a diet of tallow or animal fat than a diet of sugar, yet both of these agents, and honey also, are hydro-carbons. But cane sugar contains a larger percentage of heat producing elements than grape sugar, which is the chief constitutent of honey, and animal fat contains a larger per cent. than cane sugar. It would, therefore, appear that if cane sugar syrup is a better diet for bees in winter than honey, that animal fat (if the bees could be made to subsist upon it) would be better than either.

It may be assumed that my comparisons are not parallel, that bees in a state of confinement pass no feces. But my own observation, and that of many other reliable observers is, that they do, so that the question of liquid or solid food can signify nothing for or against the theory. The mere fact that pollen contains more particles that cannot be digested than honey, is no evidence that the indigestible particles in the intestines of the bees may cause dysentery. Are not the intestines of the bees, as well as of all animals, made to carry off these same particles? If bees pass, in confinement, under favorable conditions, their feces regularly as there is every evidence that they do, from the time they are put into winter quarters whether they may have flights or not, judging from the amount of the excrement that may be raked from the bottom board of a hive every few days during the winter, in what manner are we to conclude that the indigestable particles are capable of causing disease?

Now the fact is just this, bees hold an intermediate place between warm and cold blooded animals. They are more or less active, and develop heat at all times. There is, therefore, always tissue waste, and as a part of the excrement of all animals is made up of this tissue waste, it cannot matter what the bees may subsist upon, there will be formed excrement, and I contend that this excrement is passed regularly by them throughout the winter, and the passage is only interfered with by unfavorable conditions to the life of the bees.

But if there is tissue waste in winter, there is also a necessity for nitrogenous food, and so I believe, as before stated, that bees eat a little pollen all winter,and that that little is just as necessary for their well-being to eat as is honey. I, therefore, stand for the wise and intelligent provision in nature of honey and pollen for the bees, and hold that they constitute the best food it is possible for them to have under all circumstances, and I re-assert that it is no more probable that pollen should be a cause of dysentery than that honey should be, and that it is impossible for any one to comprehend how either can be, assuming that both in any case are of good quality.

I had supposed that Mr. Heddon had abandoned the pollen theory, but from a recent article in the BEE JOURNAL it appears that he still adheres to the old flame. The above is, therefore, very respectfully submitted, for there is no one, perhaps, more deserving than Mr. H. for the zealous and persistent effort to unfathom the mysteries that have heretofore surrounded the causes of bee dysentery in winter.

New Philadelphia, O.

For the American Bee Journal.

Bees Injured by Heat.

M. BRAY.

I think that the bees with deformed or crippled wings, that Mr. J. D. Enas speaks of, on page 371, must have been caused by over-heating. On July 8, 1882, the thermometer went up to 108° in the shade, in this place. This day ruined all of the brood in my apiary.

The young bees were very much dwarfed in size, with only rudimentary wings, and would leave the hive much as Mr. Enas describes their leaving. The queens stopped laying for some two or three weeks; the bees, being mostly field hands, during this time flooded the brood-chamber with honey. When the queens commenced laying, it was only a small patch of eggs at first, and increased slowly, as in early spring. We have had some extreme heat during the present season; the mercury going as high as 110°. By raising the hives from the bottom boards, and keeping them well shaded, I have escaped injury to the brood from heat; but the old bees have been injured by heat while clustering on the outside, for soon the shiny or hairless bees put in an appearance, in quite large numbers. There had been no robbing among my bees for the season, and I claim that this smooth appearance was caused by heat.

These hairless bees are short lived, about two weeks, and the most of them lie dead in front of the hives. A neighbor of mine has had brood ruined and old bees scalded in the same hives, and now some colonies are very weak. I hear persons say that all of this talk about wintering in the North amounts to nothing to us in California; this is a land of perpetual bloom; but I think a little protection from cold in winter, and protection from heat in summer, would not be amiss.

I am now devising a double-walled hive to secure my bees both from heat and cold. To-day, as I write, the mercury stands at 104°. The bees have come through with a light harvest, but the bees are in good condition.

New Almaden, Cal., Aug. 18, 1883.

Read before the Maine State Association.

Breeding the Best Queens.

J. B. MASON.

In no department of animal life is it so easy to make rapid progress towards perfection in breeding, than with the honey bee. With our stock generally, it requires a series of years to add such qualities as are deemed desirable, or to get rid of those we wish to eradicate. This, of course, is owing to the fact that conception and uterine growth is a slow process, when compared with reproduction in the insect class. With the bee, several generations can be produced in the same time that would be required to bring forth a single specimen among the mammals.

Knowing these facts, and understanding as we all may, that 16 days only is required to produce a queen from the egg, and only 25 to 30 to have it fertilized and ready to reproduce itself, it will be seen that the possibilities in the matter of perfecting our colonies, are incalculable. While in the past considerable attention has been given to matters of queen breeding, the chief attempts have been to work for color; why it is I know not, that a bright yellow color has been considered the type of beauty in the Italian bee, or why a rich, dark brown has not been accepted as the style. But such has been the fact, and the aim of queen breeders has been to produce handsome bees, oftentimes at the sacrifice of those other qualities which alone can make them a source of profit. In a state of nature such is not the case; as a rule, the strongest and hardiest become the fathers and mothers, while the weaker must necessarily go to the wall. The result is invariably, that all animals reared in a wild state, are as nearly perfect as it is possible to have them, while it remains with man to produce inferior specimens from superior stock. In the breeding of cattle and stock generally, the rule now is to strive to improve.

We first ascertain or determine what particular points we desire to maintain and perpetuate, and to bend our best energies to the work. Already we have made vast progress in this direction. As an evidence, I can point to the vast size of our Shorthorns, the milk, butter and cheese qualities of our Jerseys, and horses for speed, while ten years ago a mile in three minutes for a horse to travel was considered fast. We now think we are getting a slow rate of speed unless we can drive that distance in 2:25 or less. The time has come, however, when beauty of color alone in our bees is a matter of secondary importance. Bee-keepers are demanding something more; they have found out that beauty alone will not secure them a big crop of honey, and as but few keep an apiary for experiment only, they desire, regardless of color, such stock as will guarantee them a good surplus crop, not that they object to beauty, but unless they can obtain it in connection with those other qualities which make their bees fairly remunerative, they decidedly prefer to take color as it comes, rather than to please the fancy at the expense of the pocket. How, then, shall we rear such queens as will prove the most remunerative, and which perpetuate those qualities that will give us bees for business? In the first place, then, we must select for the queen mother such as give us hardy, long-lived, industrious, strong winged and peaceable bees. If such a colony is of the right color for style, so much the better.

A queen reared from the egg of such a colony, must necessarily prove a good one, and if she becomes fertilized by a drone from another such a colony of different strain, we have so far done all that is necessary to improve in the right direction. Keeping the above points in view, and breeding only from strong colonies, we will get the best queens possible. If we wish to rear queens, however, at a time when no honey is being gathered from the fields, we must feed our bees liberally while cell building is going forward, as there is no doubt that better queens are reared while the bees are getting stores plentifully, either from the field at large, or from the feeder at home. I do not think it makes any difference whether queens are reared under the swarming impulse or not, as regards their value, provided we supply artificially and in plenty the stores which they naturally gather for themselves. In fact, I am rather of the opinion, that if we keep close watch and force our bees to use eggs rather than larvæ three or four days old, as they are apt to do when under the swarming impulse, we shall get a stock of queens superior to many that remain in the hive after a swarm has issued.

By careful attention to details, and by taking as much care in the selection of the drone mother as of the queen mother, and always selecting strong colonies of business bees from which to procure both queen and fertilizing drones, working for beauty as far as is practicable, yet making that point alone a secondary one, we can soon produce a strain of bees, that are not only capable of bringing us in a handsome amount of profit, but also as beautiful in color as we may desire, and so peaceable in disposition as to be handled without danger of their stings. All this will cause trouble and care on the part of the breeder, and as a rule, in order to bring breeding to absolute perfection, it must be made a specialty; the ordinary bee-keeper cannot rear perfect queens and give that time to a honey apiary as will be found necessary to give the best results. Let us look forward then to the good time coming (and it is sure to come) when our bees will be as near perfection as are our horses and cattle.

In this article, I have not attempted to give any directions for rearing queens, as they can be found by any one in the various manuals and journals of the day, but have endeavored briefly to point out the necessary requirements to make our colonies as perfect as it is possible to have them, and as the colony depends wholly upon the queen, and the drone she mates with, all that we require is to select both male and female parents, from such colonies as possess the most desirable qualities, and by following this plan out in detail, we shall soon be able to accomplish our purpose, and that, too, with positiveness and certainty, and in an exceedingly short period of time. We have the patience to work for a series of years to improve our cattle, why not have the patience then for a few months to bring this about with our bees, especially when we know that we shall attain success eventually?

Prairie Farmer.

Bees in Poetry.

S. V. COLE.

Of the little folks of nature the bees are among the most interesting. They shine not only in the field of flowers, but in the field of letters. They supply the husbandman with food, and the poet with simile and metaphor. This was especially true of the ancient poets. The Muse, in coming hither from the Golden Age of Saturn, started like the linden in Tennyson's "Amphion,"

> With all her bees behind her.

If we ask what has made the bees so interesting, we find, among other causes, that they are creatures with whom order seems to be the first law. The sluggard may go to the ant for lessons in the art of perseverance, but his education is not complete until he has graduated from the bee in the science of method, economy, and the duties of a good citizen.

A bee makes wise plans, and works for the common weal of his nation; and whatsoever he findeth to do he doeth with his might. Even when he uses his sting, he puts his whole soul into it, for he is soldier as well as citizen. This double character has led the poets to compare the bee community to a State, in which every member has his special duty; but in this comparison the bees have the advantage. Our systems are the imperfect development of ages, whereas the bees received theirs perfect in the beginning; so that Virgil says they pass their lives beneath "unchangeable laws." Shakespeare calls them

> Creatures that by a rule in nature teach
> The art of order to a peopled kingdom.

Virgil has sung of the bees in fuller strains than any other poet, and has interwoven fact, theory, legend in a most charming manner. The fourth book of the Georics, the most perfect of his poems, is devoted to this theme. Here occurs the story of the shepherd Aristæus, who lost his bees and complained to his goddess-mother "in her chamber in the river-depth." She directs him to Proteus, the seer from whom he learns the secret of replenishing his hives.

In Virgil the bees are minified types of humanity, just as the gods are magnified ones; and they go about their business, therefore, after the manner of men:

> Some seek supply of food
> And by agreement labor in the fields;
> Some in their narrow homes do lay the tear
> Of the narcissus and the gluey gum
> From bark of trees, to be their hive's foundations.

The contrast between the aged and sedate bees, and their more vigorous companions is very curious:

> The aged guard towns, and build the combs
> And mold the curious houses; 'tis their charge.
> But late at night the younger ones return
> Wing-weary home, their legs thick-smeared with thyme.

One observes that the Latin poet does not forget in his figures to bring the bee-commonwealth under Roman laws and customs. In another place he speaks of their "setting out on their airy march, and pulling up the standards of the camp." Indeed, the Roman bees are soldierly in bearing, though not more so, perhaps, than their English relatives. As, in Shakespeare, some,

> Like soldiers armed in their stings,
> Make boot upon the summer's velvet buds,

so the Virgil,

> Some stand like sentinels before the gates.

At times the whole nation is roused by an unfriendly challenge. Then it is they show themselves true Romans. Their hearts "throb with the spirit of war," says Virgil. A sound is heard "that mimics the fitful blasts of trumpets." The excited bees "flash their wings," "whet the points of their beaks," throng around the chief's pavilion, and—*mirabile dictu!*—"with loud shouts defy the enemy!" Then comes the conflict, in which

> The leaders, midmost of the battle lines,
> Conspicuous for their wings, exhibit how
> A mighty soul works in a narrow breast.

The analogy between bees and men is seldom carried more dangerously near the verge of the ridiculous than when a bee dies and the survivors bear out the lifeless corpse.

> And form the mournful funeral train.

Time has somewhat dimmed the picture, but with its suggestion of the busts of dead ancestors and other bygone accompaniments of a funeral, it must have been somewhat vivid in its day.

Bees, along with ants, birds, leaves, and hailstones, furnished the ancient poets with convenient similes where numbers were involved. Homer compares the Greeks gathering for battle to "swarms of closely-thronging bees, always issuing in fresh numbers from the hollow rock." Æneas, looking down on Carthage from a distance, saw the people at work on the new buildings like so many bees in summer. And Milton, whose mind was filled with classic forms, makes Satan's minions swarm to the council at Pandemonium

> As Bees
> In springtime, when the sun with Taurus rides,
> Pour forth their popolous youth about the hive
> In clusters.

In American poetry, Emerson's "Humble-bee" and Whittier's "Telling the Bees" are unlike anything the ancient Muse produced, and also differ widely from each other, both in style and sentiment. The former contains the thoughts which arise in the mind of a philosopher as he calmly contemplates the

> Sailor of the atmosphere

making his tiny voyages from flower to flower; while the latter is a simple and very effective appeal to the affections. Mr. Whittier's poem is founded on the curious custom, introduced from England and said to have prevailed to some extent in the rural districts of our own country, of informing the bees, in the event of a death in the family, and draping the hives in black. This was supposed to be necessary to prevent the bees from flying away in search of a new home:

> Under the garden wall,
> Forward and back,
> Went drearily singing the chore-girl small,
> Draping each hive with a shred of black.
>
> * * * * *
>
> And the song she was singing ever since
> In my ear sounds on;
> "Stay at home, pretty bees, fly not hence!
> Mistress Mary is dead and gone!"

As good order is so strikingly exhibited in the government of the bees, for the bees, and by the bees. it seems appropriate that in Egyptian hieroglyphics the bee should represent royalty, and, in latter times, become the symbol of the French Empire. In France the royal mantle and standard were thickly sown with golden bees, and in the tomb of Childeric, in 1653, there were discovered 300 bees made from the same precious metal.

For the American Bee Journal.

Another Dual Queen Wrinkle.

J. O. SHEARMAN.

I have about come to the conclusion in my own mind that the usual cause for two-queen-ed-ness is an intent to supersede the old queen. And this is why: I had a queen in a full colony which had never gone out with a swarm (and this is her third season). She always kept her hive well stocked with bees which did well on surplus, and was, therefore, a favorite. I looked into the brood-chamber in basswood time (forepart), and found queen-cells capped, so I set the boys to watch for the swarm that I expected must come the next day or so, but the rain continued to come, with 2 or 3 cooler days, and the swarm did not come out. They still crowded the surplus chamber, so just about the last part of the basswood flow I looked in the brood-chamber for the reason, as I wanted her queen-cells. I found a queen-cell hatched naturally, also plenty of eggs and brood and the queen. Thinking they had torn down the rest of the queen-cells, and, perhaps, made away with the new candidate, I took the queen out with one comb of brood and bees, and made up a nucleus for the present, as it was a busy time. Then in a few days gave her another comb or two with bees, and noticed soon after that she filled them pretty fairly with eggs.

Now, to the point; on the 10th or 11th day after taking out the old queen, I went to the old hive after my queen-cells, and found plenty of eggs and brood in all stages. Thinking, perhaps, that the old queen had gone back (as it was only 10 feet away), I went to her hive and found her doing well enough, for a nucleus, indicating that the old colony (No. 56) had two queens at the time I took the old one away.

Then I had an after-swarm of hybrids sitting near by for this purpose, so I doubled them up with the old queen, and gave another comb of brood in the back part of the brood-chamber. A few days after this, I looked in to see if all was well, and found queen-cells, and the hybrids in the back part of the hive were building drone comb in a frame that was only partly filled at the time of doubling up.

Censuring the hybrids for murdering my $3 queen, I looked through the hive to make sure of the case, and found her in the forepart of the hive among her own bees, and looking rather "slimmed up," as she was also at the time I took her out of No. 56 (there had been two days of rather cool weather again). Also I found 4 or 5 queen-cells on a comb that she had occupied. The hive was well stocked with bees at this time, on 8 frames, enough for breeding but not for surplus.

Now I thought I had her where she could furnish queen-cells, so I shut them up for six days, and then went for my queen-cells again, and found, instead, a young queen going around among them, and all the queen-cells destroyed.

Fearing for my $3 queen again, I hunted her up in the very front of the hive, and doing a good business for this season of the year, and fairly fatted up to a good sized queen again. She had increased the size of her brood-nest 2 or 3 full combs, and appeared to be able to fill the hive in another week.

The young queen appeared to be unfertile, at least to me, as I believe I can tell by their personal appearance, if fertile or not. So I put her in a nucleus to keep till I see how she might "pan out." These are some of my play things. This brings these experiments up to date. Next, if they undertake to supersede old No. 56 queen again, I will see if I can set up a queen-cell establishment with her; take away the cells and put them on the back to try it again, and then see if these queens are as good as others.

New Richmond, Mich., Aug.25,1883.

For the American Bee Journal.

The Honey Season in New York.

JAMES McNEILL.

The honey flow thus far in this section has been only fair. It opened well in the beginning with an abundant harvest from fruit bloom, which induced early swarming.

The much-wanted white clover bloomed profusely, but the bees did not get much more than a growing living from it. In fact, my observation during the four years that I have kept bees, leads me to hold white clover in less esteem than any other important honey plant. I have usually been able to count 25 bees on raspberries, during the same time that I have been able to find three sipping the nectar from a field of white clover. You can find bees roaring on raspberries from "early morn till dewy eve," and a passing shower drives them home, only to return again as soon as it is over. But it is only occasionally that I have been able to hear the genuine hum of industry from a field of white clover. They do not take possession of the clover field as they do of the raspberries.

The scattering English linden and basswood trees of this section bloomed abundantly, and gave the bees a fine feast. It was from this source that I obtained most of my surplus.

I hoped much from sweet clover, as I have never seen a better stand nor a more abundant bloom. But directly after basswood bloom, a period of cool weather set in, which I think must have interfered with the secretion of the nectar. The nights were exceedingly cool for the season, and some mornings were actually chilly, still the clover was alive with bees during the day, and they stored some surplus. But a first-class case of robbing could be developed any day by a little carelessness in exposing honey.

With the advent of August a dry spell set in, and it looked as if our usual fall drouth was upon us. Happily this has been postponed by a copious rain on the night of the 18th.

Although buckwheat has been in bloom for two weeks, my bees did not settle down to actual business on this fragrant plant till the 17th. On the morning of that day it seemed as if a ship-load of honey had arrived in port, and my bees were given the contract of unloading it, with a forfeiture, if the task was not performed within a given time.

Can you explain why bees start up so suddenly to work on a plant which has been in bloom for many days?

The late rain will, I think, insure a good fall crop, as we will probably have a fine, warm fall to offset the cool, wet summer. Two years ago I took half of my crop after the middle of August. If I do the same this year I will have no reason to complain, although I cannot boast of such yields as are reported from some sections of this State.

I do not know but that I shall have to take back, in a measure, my strictures on white clover. The grounds of my apiary are sown to white clover, which I have kept closely cut with a lawn-mower till lately. They are now white with bloom. I have just been out to take a look at my busy workers, and the way that they are flitting from flower to flower over my clover lawn, leads me to earnestly wish that I had 100 acres like it. I would then be in clover as well as the bees.

Hudson, N. Y., Aug. 20th, 1883.

[Cold weather retards the nectar, and when it does get a chance, it bursts out and has the same effect as though a ship load of honey had arrived, as is mentioned above. We well knew you would change your estimate of white clover; it is one of the best of honey producers.—Ed.]

Maine Bee-Keepers' Association.

The regular quarterly meeting of the Maine Bee-Keepers' Association was held in Augusta, on Thursday and Friday, Aug. 9 and 10. Although it came in a somewhat unfavorable time for a large attendance, farmers being just in the midst of the grain harvest, yet a goodly number were present at all the sessions, and the discussions were animated and interesting.

The meeting was called to order at 10 a. m. by the president of the association, Mr. F. O. Addition, who presided throughout the meeting, to great acceptance. The forenoon was chiefly taken up with business of a routine nature, and with brief discussions upon a few practical points which came up. At the opening of the afternoon session, a paper was read by Mr. J. B. Mason, of Mechanics Falls, on the subject of queen-rearing. The remainder of the afternoon was taken up with a general discussion of that and allied subjects.

At the close of the afternoon session the members, their friends, and a few invited guests, by invitation of the editor of the *Home Farm*, visited his home and bee-yard, examined his apiary of 6 or 8 colonies, had a practical bee convention then and there, and were entertained at a little informal lawn "spread," which it is hoped proved as enjoyable to them as it was gratifying to him and his. The evening was pleasant, and passed off too quickly

In the forenoon of the second day, a paper was read by Mr. John Reynolds, of Clinton, on "Climatic influence in bee management," particularly in regard to the spring care of bees, followed by a brief essay from the pen of Mr. O. L. Sawyer, of Gardiner, on the occasion of the losses of bees during the past winter—a discussion upon the two papers occupying the forenoon

At the opening of the afternoon session, the report of the committee appointed to award the preferences on articles exhibited, was first presented. Following the presentation of this report there was a discussion in regard to establishing the price of honey, and uniting in its sale, and W. Hoyt, F. O. Addition and J. B. Mason were appointed a committee to correspond with producers and buyers in regard to the advisability of such a course. The next session of the association will be held at Lewiston on the second Thursday of February next, and J. B. Mason, L. F. Abbott, of the Lewiston *Journal*, and Dr. J. A. Morton, of Bethel, were appointed a committee to make arrangements for the same.—*Home Farm*.

Bee-Keeping in Mississippi.

O. M. BLANTON.

After an excellent honey flow of two months, the dry season has well set in, and bees are slowing up in gathering honey. I have taken off, up to date, over 2,200 pounds of honey from 201 colonies. The apiaries of Washington County, Miss., and Chicot County, Ark., have yielded remarkably well up to date. Mr. G. C. Vaught and myself visited the bee-keepers of Chicot and Washington counties, last week, and found bee-keeping on the boom; many making preparations for a large increase of their colonies another year. There were only nine bee-keepers working with movable frame hives, last year, in these two counties, and now there are more than 30. We visited the apiaries of Messrs. McLendon, Walter Davis, Victor and Theodore Johnson, Robert Adams, Judge Harriman, and Messrs. Irving & McShee, and were much gratified at their progress and success. All work for extracted honey. On account of sickness we failed to call on Mr. Kinckead. We were informed that his apiary was in fine condition. He and Mr. McLendon both have their own foundation machines, and supply their neighbors. The yield of Judge Harriman's (80 colonies) and Mr. Robert Adams (30 colonies) exceeded, at that date, 200 pounds per colony. In November we expect to organize the Mississppi and Arkansas Bee-Keepers' Association.

Greenville, Miss., Aug. 23, 1883.

For the American Bee Journal.

A Starter Machine.

GEO. E. LYTLE.

I send a drawing of a Starter Machine, which is the invention of a bee-keeper near here (D. A. Sailor).

There is an awakening interest in bee-keeping here, but there are, as yet, very few bees kept in anything but box hives, yet we have a good location. There is plenty of room for enlightened bee-keepers here. Our honey season commences very early—the last of January and February. We have no trouble in wintering our bees if they have stores in plenty, so as not to starve.

Figure 1 shows a top view of the machine, which consists of a board, A, 10 inches wide by about 20 long. This has two pieces, B B, tacked on, which are 6½ inches apart. Inside C, is a block, 1 inch thick and 4½ wide, by any convenient length, say 4 or 5 inches, to which is tacked two strips, D D, 1 inch wide and 1 inch thick by 10 long, which just slip between the strips, B B. E is a lever pinned to the board at H, which pulls the block, C, down against the post, F, which comes through a hole morticed in the board, A. Fgure 2 shows the post, F, with a ⅛ inch hole at P, and a board, R, nailed to the bottom for the machine to stand on. Figure 3 shows the shape of one of two blocks which are nailed to the underside of the board, A, with a hole at I. A peg is put through these holes, and also through the hole, P, in the post, F, which is between the two blocks in Fig. 3. Let the head of the post, F, when the board, A, is level, be just half the width of the section above the top of the board. Let the two wire springs, one of which is shown at Q, be just ⅛ or 3-16 below the top of the post, F. These should have the point in a hole in the post, so they can sink in; as the section is pressed up against the post, they catch the starter and guage the depth that is marked into the wood.

Figure I.

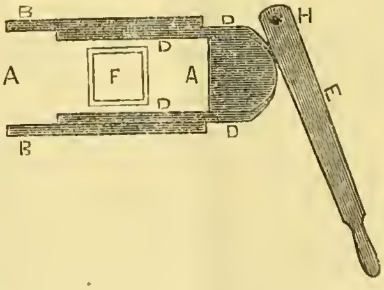


Fig. 2

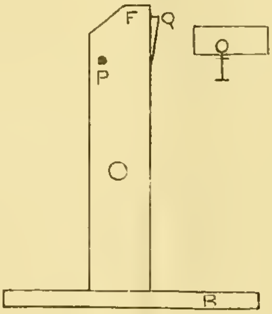
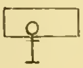


Fig. 3



The section is placed around the post, F, and the starter dropped against the wire springs with the right hand, brings the lever E, against the block, C, which will mash the section against the post, and squeeze the starter to the section; then with the left arm or elbow, shove the end of the board, A, down, which shoves the section up, mashes the starter well into the wood of the section, and bends the starter down right all ready for the hive. This is by far the best machine in use to my idea, as you can do faster and better work with it than any of the others.

I forgot to state that the head of the post, F, is covered with a piece of tin to prevent the wax from sticking to the post, instead of the section.

Flat Bayou, Ark.

Ontario Convention.

The third annual general meeting of the Ontario Bee-Keepers' Association will meet in the City Hall, Toronto, on Tuesday, the 20th day of September next, during the second week of the Industrial Exhibition. As the North American Bee-Keepers' Covention meets at the same time and place, it has been arranged that the two bodies hold joint meetings in discussing matters pertaining to our common interests, as the leading bee-keepers of America are to be present. This will, undoubtedly, be the most interesting meeting of apiarists ever assembled in Canada. The venerable Mr. Langstroth and all the prominent bee-men of the United States are expected to be present. A profitable time is anticipated, and a good turn-out requested. The convention will last three days. A meeting for the purely business work of our association will be held sometime during the convention, of which due notice will be given.

R. McKNIGHT,
Pres. Ontario Bee Association.

☞ The Cass County Bee-Keepers' Association, organized on the 15th of August, will meet on the 10th of October, 1883, in Logansport, Ind. All persons interested in bees and honey are respectfully invited to come. DE WITT BROWN, *Sec.*

☞ Articles for publication must be written on a separate piece of paper from items of business.

SELECTIONS FROM OUR LETTER BOX

Well Satisfied with the Harvest.

The season is over, and I am well pleased with it. I extracted from about 80 colonies of bees, and realized about five tons of honey. A new discovery has been made in this valley, by a well-known bee-keeper named Hugo Sontag, who had about 300 colonies of bees in his apiary, in the last part of May. He found a queen with four yellow stripes on her abdomen, and the wings are scarlet. This queen he put into a colony of bees, which swarmed twice this season, and he realized 175 pounds of extracted honey from it. Mr. Sontag desires to have these queens in his whole apiary. He thinks they are more profitable than the Italians.

A. CORSEN.
Cucamonga, Cal., Aug. 22, 1883.

Verbenas.

Please tell me through the columns of the bee-keepers' standard friend, the BEE JOURNAL, the name of the enclosed bloom, and its merits as a honey plant. I never saw but very little of it here, before this season, and at this date it is thick on the road sides and pastures, and green vacant lands. It commenced to bloom about the 10th of July; there are three colors of bloom: blue, purple, and nearly white, and is about 2 to 3 feet high, and looks as though it might bloom till frost. It seems to be a favorite with the bees. They work on it from early morn till late sun down. My bees are in white, red and sweet clover up to their eyes now, early and late, and a 5-acre sheet of silver hull buckwheat bloom to breakfast on every morning at day break. We have a good harvest yet. R. M. OSBORN.
Kane, Ill., Aug. 11, 1883.

[This is one of the four quite common vervains (*Verbena hastata*). It doubtless has been plenty in certain places in the neighborhood before, but escaped observation. It is a very good honey plant.—T. J. BURRILL.]

My Honey Salesmen.

The Madison County Fair Association (held at Richmond, Ky.,) did not offer any premiums on bees or honey. I made a display of Italian bees, about 500 pounds of honey, hives, sections, smokers, knives, Given foundation press, extractor, etc., and distributed 100 pamphlets on "Honey as Food and Medicine." My display attracted considerable attention, for it was something new to most of the people. I think I attained my object, viz.: To create an interest in bee-culture, and I am sure the 100 pamphlets on "Honey as Food and Medicine," which I distributed, will sell a great quantity of honey.

C. D. MIZE.
Cleveland, Ky., Aug. 26, 1883.

Too Dry for Buckwheat.

The season here has been rather behind the average for honey, as the weather was poor in the best honey season. Bees are getting a comfortable living now, and enough to cap up unfinished work. Goldenrod is just beginning to show, and they may get something from that, if there should come a shower and warmer weather soon. There is some buckwheat in bloom, but it is too dry now for buckwheat to yield much.

J. O. SHEARMAN.
New Richmond, Mich., Aug. 25, 1883.

Tropical Honey Tree.

I send bloom and foliage from a branch broken off an ornamental tree 20 to 25 feet high, in one of the southern cities of this State, by a neighbor who is an admirer of and has a number of fine Italian bees, who was attracted to it by the hum of the bees that were around and upon it, gathering the honey. He says that it is the most wonderful attraction for bees that he ever saw; that a plate of honey out in an apiary in the month of August would not produce a greater excitement. The property on which the tree stood was occupied by a tenant, who could not give any information about it, only that it is a great attraction for bees. Will you please give us the name and nativity of the tree, and oblige.

C. C. RICHARDSON.
Tipton, Ind., Aug. 9, 1883.

[The tree is one of the numerous species of *Aralia*, natives of Tropical America, allied to the well-known Hercules club, (*Aralia spinosa*). Nothing is known of the species as honey producers, but from the structure of the flowers, one would be led to suppose they might be very attractive to bees.—T. J. BURRILL.]

Introducing a Queen in August.

The following may encourage somebody. I ordered an early queen in May; she arrived in August during a rain storm, when I did not want her. I took two frames of brood, etc. with bees adhering and put them in a small hive, smoked them and stopped them in. The next day I put the Italian queen in her cage, at the entrance of the hive, and the day after that I turned her in, smoked them, and shut them up for two days. They accepted her. R. B. DRANE.
Edenton, N. C., Aug. 23, 1883.

Smart-Weed Honey.

The flow from smart-weed commenced 10 days ago here, and is immense. There is only 4 or 5 acres of it, and about 200 colonies of bees working on it. Each colony will gather as much from the 4 or 5 acres, as they would from 100 acres. I firmly believe if there was 400 colonies here, each would gather just as much as if there were but one. If bees were as strong in numbers at this time of the year as they are at the time horsemint blooms, they would gather just as much honey; yet there are 50 acres of horsemint where there is one of smart-weed. It seems that every time the horsemint fails here, the smart-weed takes its place. In 1879 the horsemint failed, and there was an immense flow from smart-weed, some colonies gathering a surplus. In 1881 the horsemint yielded very little honey, and the smart-weed yielded plenty for winter supplies. Last year the horsemint flow was immense, and we got none from smart-weed.

W. S. DOUGLASS.
Lexington, Tex., Aug. 20, 1883.

How is This?

2,825 pounds of honey from 28 colonies, spring count, and the fall honey yet to be gathered. I have increased to 55. I and my better-half extracted 900 pounds in one day. I have sold about 1,400 pounds already; the basswood trees were in bloom 21 days. Some colonies gave 160 pounds. I will send a full report this fall. My honey is No. 1 basswood.

FAYETTE LEE.
Cakato, Minn., Aug. 26, 1883.

Bee Balm.

Please give me the botanical name of the enclosed. It is some kind of mint on which bees work quite extensively, but I do not know its botanical name. J. E. VAN ETTEN.
Kingston, N. Y., Aug. 10, 1883.

[This beautiful plant is often known by the name of "Bee-Balm," or "Oswego Tea" (*Monarda didyma*). It is a native of the portions of the United States north of about 41° latitude, or from New England, northern Illinois, northward. It is closely allied to the more common "Horse-Mint," (*Monarda fistulosa*). The plant might be cultivated without trouble, but in nature it prefers moist grounds—T. J. BURRILL.]

Honey Season in Texas a Failure.

The honey season is over in Texas, and is nearly a complete failure. Unless we have rain soon to start up fall flowers, we will have to feed heavily, the coming winter. We hope for a mild winter, and, if it comes that way, we are all right, and will be all ready for a boom in 1884.

E. P. MASSEY.
Waco, Texas, Aug. 28, 1883.

Making a Local Market.

My bees for five weeks have done no good; they are at work now like little heroes. I do not look for much fall honey, as it is dry, and there is not a large crop of flowers. I have sold all of my white clover honey at 16⅔ and 20 cents per pound, and could have sold as much more, if I had it. I live in a village, and sold all of my honey at home. Bee men must talk it up at home. I go to a family and try to sell them honey, and if I cannot sell them but one pound, I sell it, and

will not be a week before they want wo pounds. I think honey, if managed rightly, will be readily sold at paying prices. D. R. ROSEBROUGH.
Casey, Ill., Aug. 27, 1883.

Spiked Loose-Strife Plant.

I send a box of flowers which I would like you to name in the BEE JOURNAL. It appears to be an excellent honey plant. It grows in our marshes and low lands, and grows from 6 to 8 feet high. I find the bees working on it all day long. I found some growing in the centre of a large patch of sweet clover, and as many bees working on it as the sweet clover. It commences to bloom in June, and continues to bloom until frost.
WM. K. LAWSON.
Cold Spring, N. Y.

[This is the spiked loose-strife (*Lythrum salicaria*). It is an excellent honey plant, and worthy of cultivation for this purpose, as well as for its beauty. The arrangements for cross fertilization by bees are most curious and wonderful.—T. J. BURRILL, Champaign, Ill.]

Good Season for Honey and Increase.

Notwithstanding the very severe winter, and unusually backward and wet spring, we have had a very good summer, both for honey and increase, in this part of Ontario. Some bees here swarmed as late as the 16th of August, and we extracted until the 20th; then robbing commenced, and we stopped extracting, with most of the hives full of honey. I commenced the honey season with 29 colonies, and will have about 3,500 pounds of extracted honey, when it is all taken off, and increased to about 66 colonies, by natural swarming; and then up to about 80, by taking down top stories. I have not seen any drones killed yet. We had our first frost last night. Bees are working strongly on golden-rod now. W. G. RUSSELL.
Millwood, Ont., Aug. 29, 1883.

Manitoba Bee Plant.

I send you part of a plant which grows here wild, in the streets, and attains from 3 to 4 feet in height. It branches out very largely. If this be a bee plant, it may be of service to bee-keepers, as it will fill up the time between basswood failing and the autumn flowers. If it should be desirable as a honey-producing plant, the seed can be had in any quantity. It is a vigorous grower. It seems filled with insects, either sucking the honey or the juice of the plant itself. White clover grows here well, and the prairies are a regular bed of wild flowers. Bees are not kept here yet, but I think ought to thrive well. Trees here are very scarce, except along river banks, but the land will produce anything, being very rich and productive. Wheat, at present, is the great staple. I am at present so situated that I cannot indulge in my favorite hobby, but I take an interest in it, and from the mere love of it, I hope some day to indulge myself in the luxury of bee-keeping. I shall not be able to attend the meeting of bee-keepers in Toronto in September next, but I trust our friends from the United States will be generously entertained by their bee friends in Ontario. I shall be much disappointed if the meeting is not of the most pleasing character.
LEWIS WALBRIDGE,
Chief Justice of Manitoba.
Winnipeg P. O., Aug. 16, 1883.

[This plant produces little or no honey. The species is not confidently recognized, but it belongs to the great sunflower family (*compositæ*), however unlike a sunflower its appearance. Its nearest relative, known to me, is the great ragweed (*Ambrosia trifida*), not uncommonly found almost everywhere along water courses and in rich, low grounds. The amount of pollen produced by this Manitoba plant is prodigious, and it was doubtless this that attracted the insects. The flowers are, when taken singly, very inconspicuous.—T. J. BURRILL, Champaign, Ill.]

Robber Flies.

Enclosed find two insects which I would like you to give me the name of through the BEE JOURNAL, together with any other information of them you may have. I will give the heaviest and largest as No. 1, which I find to be very destructive to bees, killing them all day long, and it seems that it only kills bees when returning with their load. I have killed as many as five in one day, among my bees.

No. 2, the sharpest, kills a great many, but not as many as the other. The cause may be it does not take so much to do it.

Bees have done very well in this country, considering the most of them are in box hives and hollow logs. A neighbor and myself are all that keep bees in movable comb hives, and we began this season, and some of the old bee-keepers tell us we will do no good, as this country will not produce the honey, but we have many honey-producing plants and shrubs.
DR. S. L. YOTHER.
Brush, Tenn., Aug. 4, 1883.

[They are both species of robber flies. No. 1 is the one often called the bee killer (*Trupanea apivora*). One of these insects, watched during one day, was known to have killed 141 bees. As the juices only of the prey are sucked, the number may not appear so surprising, supposing the purpose of catching the bees is for food.

No. 2 is another species of the same family (*Asilus sericeus*), and has similar habits. Make a hoop of wire bent so as to form a circle 9 inches across with the two ends so bent as to enter a hole in the end of a stick three or more feet long. On the wire hoop sew a bag-shaped net of mosquito-netting, or some similar stuff. Let the bag be about 12 to 15 inches deep. With this one may soon learn to catch these desperadoes, swinging the net in one hand.—T. J. BURRILL, Champaign, Ill.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Bees with Hairy Feet.

Enclosed I send you several dead Holy Land and Italian bees. Please examine them and tell me what you know of bees having such feathery or hairy toes, and did you ever see such bees before? I have thousands of them in all my crosses with the Holy Lands, Italians and blacks. They are good workers. I want to know if they have longer tongues than the original or not? They are very docile and gentle. We have had a fine rain for the past 48 hours, 4 inches of water fell, and white clover is blooming again. My bees have taken a fresh fever to swarm. I had one swarm to-day, and all of my hives are full of bees and honey. The sun shines very hot, 90° in the shade at noon to-day.
R. M. OSBORN.
Kane, Ill., Aug. 26, 1883.

ANSWER.—The bees enclosed in your letter were so mashed that one could discern only that they once bees. None of the peculiarities you mention were distinguishable.

☞ May we ask you, dear reader, to speak a good word for the BEE JOURNAL to neighbors who keep bees, and send on *at least one new* subscription with your own? Our premium, "Bees and Honey," in cloth, for one *new* subscriber to the Weekly, or two for the Monthly, besides your own subscription to either edition, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the Bee Journal.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

How to Create a Market for Honey.

We have now published another edition of the pamphlet on "Honey as Food and Medicine," with more *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy 5 cents, postpaid; per dozen, **40 cents**; per hundred, **$2.50**. 500 will be sent postpaid for **$10.00**, or 1,000 for **$15.00**. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit. Try it, and you will be surprised.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a statement of account every week.

Trial Trip—25 Cents.

As the season for Fairs has arrived, and wishing to be able to reach several thousands of the old-fashioned bee-men, and by the aid of the Bee Journal to lift them up to higher ground, adopting newer methods and progressive ideas, we make the following very liberal offer: We will send the Weekly Bee Journal *three months on trial, for 25 cents.* In order to pay for getting up Clubs, we will give a copy of Fisher's Grain Tables, or Scribner's Lumber and Log Book, to any one who will send us five trial subscriptions (with $1.25); for a club of *ten* we will give a cloth copy of Bees and Honey; for a club of 15, a cloth copy of the 7th edition of Cook's Manual of the Apiary; for a club of 25, we will present both the Manual and Bees and Honey. If any one wants these Books for nothing, here is an excellent opportunity to get them for a little exertion.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

☞ Do not send coins in a letter. It is dangerous and increases the postage unnecessarily. Always send postage stamps, for fractions of a dollar, and, if you can get them—*one-cent* stamps; if not, any denomination of postage stamps will do.

Special Notice.—We will, hereafter, supply the Weekly Bee Journal for one year, and the seventh edition of Prof. Cook's Manual of the Apiary, bound in fine cloth, for $2.75, or the Monthly Bee Journal, and the Manual in cloth for $1.75. As this offer will soon be withdrawn, those who desire it should send for the book *at once.*

BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN.

Editor of the Weekly Bee Journal.

925 West Madison Street, Chicago, Ill.

Mrs. J. F. Upton gives the following notice of this book in the Bath, Maine, *Sentinel:*

A guide to the management of the apiary for profit and pleasure, by Thomas G. Newman. This work is designed to initiate beginners in bee-keeping in all the secrets of successful bee-culture. Beginning with the different races of bees, the author takes his readers along step by step, carefully explaining the different kinds of bees, illustrating each kind with the eggs and brood, explaining the terms used, the production of wax and comb, and the work done by these wonderful insects. The establishment of an apiary is next considered; the best location, time to commence, how many colonies to begin with, what kind of bees to get, how to care for a first colony, keeping bees on shares, changing the location, all of which it is indispensable for a beginner to know. It is also important to know which kind of hive is the best. how to procure the best comb honey, how to procure it for market, how it should be marketed, what to do with candied comb honey, and how to extract honey. The scientific management of an apiary is then entered into, and illustrations of all the necessary applicances introduced. There is a chapter devoted to the honey extractor and its use, and another to comb foundation and its use. The various honey-producing plants and trees are named and illustrated. Various methods for exhibiting bees and honey at county and state fairs are described. The best and safest plans for wintering bees are discussed, the book closing with some general advice to beginners. The author says of his book on Bees and Honey, "it was not designed to supersede or supplant any of the valuable works on apiculture already published, but to supply a want for a cheap work for the beginners." We most cordially recommend this work not only to beginners, who will find it invaluable, but to all who are not already familiar with the lives and movements of these industrious and intelligent little workers. The information to be gained as to their habits, manner of breeding, intelligence, energy and wonderful instincts, by reading this book alone, is enough to make one regard the bee with admiration and amazement.

PRICE—Bound in cloth, **75 cents**; in paper covers, **50 cents**, postpaid.

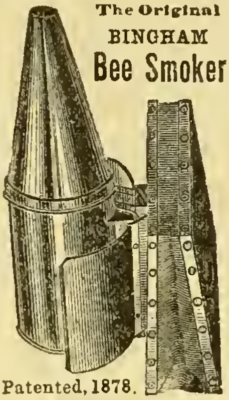
THOMAS G. NEWMAN,
925 W. Madison St., Chicago, Ill.

☞ **A Liberal Discount to Dealers by the Dozen or Hundred.**

Bingham Smoker Corner.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conquerer has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent post-paid for **$1.75.** Address,

BINGHAM & HETHERINGTON,
Abronia Mich.



CYPRIANS CONQUERED. — All summer long it has been "which and tother" with me and the Cyprian colony of bees I have —but at last I am "boss." Bingham's "Conqueror Smoker" did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham.
G. M. DOOLITTLE.
Borodino, N. Y., Aug. 15, 1882.

EXCELLING ALL.—Messrs. Bingham & Hetherington, Dear Sirs:—I am now selling your Smokers almost exclusively. You are excelling yourselves in smokers all the time.
Respectfully,
J. G. TAYLOR,
Austin, Texas, May 10, 1883.

THE VERY BEST.—The Bingham "Conqueror" smoker is the very best thing I have tried in that line. M. M. LINDSAY.
Fulton, Tenn., July 24, 1883.

◆

During the following three months, Bingham Smokers will be sent post-paid, per mail, on receipt of the following prices:

The "Doctor"..	(wide shield)—3½ in. fire tube,		$2.00
The Conqueror	(wide shield)—3 in. fire tube,		1.75
Large	(wide shield)—2½ in. fire tube,		1.50
Extra	(wide shield)—2 in. fire tube,		1.25
Plain..........	(nar. shield)—2 in. fire tube,		1.00
Little Wonder..	(nar. shield)—1¾ in. fire tube,		.65
Bingham & Hetherington Uncapping Knife..			1.15

With thanks for letters of encouragement, and the absence of complaining ones, we tender to our thirty-five thousand patrons our best wishes.
Very Respectfully Yours,
BINGHAM & HETHERINGTON.
Abronia, Mich., June 1, 1883.

Our Premiums for Clubs.

Any one sending us a club of **two** subscribers for 1 year, for the Weekly, with **$4,** will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For **three** subscribers, with **$6,** we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For **four** subscribers, with **$8,** we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For **five** subscribers, with **$10,** we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

Books at Fairs.—Those who make an exhibit at Fairs will find that an assortment of Books and Pamphlets would sell and leave them a profit for handling. We will send such, postage prepaid, at 25 per cent. discount; or if the purchaser pays express charges, we will supply any of our own publications at 40 per cent. discount.

◆

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

◆

☞ Do not let your numbers of the BEE JOURNAL for 1883 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

NOTICE.

We have just completed the largest and best lot of Smokers ever manufactured. Prices by Mail:

2 inch	....Double Blast	....	$1.50
2 "	....Single "	....	1.00
2½ "	....Double "	....	1.75
3½ "	....Single "	....	2.00

Special inducements to those who buy to sell again.

THE BEST BEE BOOK

"Of all the books on bee-keeping, QUINBY'S NEW BEE-KEEPING stands pre-eminently at the head, in my opinion." Sincerely Yours,
April 11, 1883. G. M. DOOLITTLE.

Sent by Mail, Post-paid, for $1.50.

L. C. ROOT & BRO., Mohawk, N. Y.
19Atf

REST not, life is sweeping by, go and dare before you die, something mighty and sublime, leave behind to conquer time." $66 a week in your own town. $5 outfit free. No risk. Everything new. Capital not required. We will furnish you everything. Many are making fortunes. Ladies make as much as men, and boys and girls make great pay. Reader, if you want business at which you can make great pay all the time, write for particulars to H. HALLETT & Co Portland, Maine. 8A1y

Golden Italians Again!

One Golden Italian Queen, warranted purely mated, $1.50. One purely mated and tested, $2.50. One pure Queen, not warranted, $1.00.
All the above Queens are of the finest stock in the country. I sold over 300 last season, and had but one complaint. Full colonies ready to divide, for $10.00; safe arrival guaranteed.
17Atf **L. J. DIEHL, BUTLER, IND.**

COMB HONEY WANTED.

We are prepared to purchase large lots of Fancy COMB HONEY in 1 and 2 lb. sections, or Harbison frames, for which we will pay an advance of 5 cts per pound over New York prices. **CASH ON DELIVERY** in sound condition in London; the price of extracted honey will be paid for all broken combs. This is an excellent opportunity for bee-keepers wishing to visit Europe. Correspondence solicited. **W. M. HOGE & CO.,**
The Apiary, Leconfield, Rd. N.,
33Atf LONDON, ENGLAND.

Don't Fail to Read This!

Only One Impure Queen Out of 950 Sent Out this Year!

The Queen received from you is the finest one I ever saw. She is remarkably prolific, producing fine large workers, each bearing the three bands of gold. W. H. WESTON, London, Ont.

I have 3 or 4 bee books, but yours goes ahead of all the others. WM. FLICKINGER, Doylestown, O.

Book (bound in cloth) and Tested Queen sent for **$2.00** during September only.

Tested Queen........................	$1 50
Handy Book	1 25

HENRY ALLEY,
36A2t Essex Co. WENHAM, MASS.

W. Z. HUTCHINSON,

Rogersville, Genesee County, Mich.,

Makes a **Specialty** of rearing fine ITALIAN QUEENS. All Queens bred from imported queens, and from the purest and best home-bred Queens, and the cells built in full colonies. No black bees in the vicinity. Customers can have either light or dark Queens. Orders filled **Promptly.** Single queen $1.00; six queens for $5.00; twelve or more, 75 cents each. Tested queens, $1.50 each. Safe arrival guaranteed. "All Queens sent out are reared by himself." Make Money Orders payable at FLINT, MICH. 31Dtf

BINGHAM SMOKERS.

I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including THE CONQUEROR, and THE DOCTOR.
Send for my 32-page Illustrated Catalogue of Bee-Keepers' Supplies of every description.

ALFRED H. NEWMAN,
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AND BEE-KEEPER'S ADVISER.

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We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal*, both for $3.00 a year.

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OR, MANUAL OF THE APIARY.

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10th Thousand Just Out.

More than 50 pages, and more than 50 fine illustrations added. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. **Price, by Mail, $1.25.**

Liberal discount to dealers and to clubs.

A. J. COOK,
17Ctf Author and Publisher, Lansing, Mich.

Friends, if you are in any way interested in

BEES OR HONEY

We will with pleasure send you a sample copy of the **Monthly Gleanings in Bee-Culture,** with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes,** all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly,* to
Ctf A. I. ROOT, Medina, O.

HEADQUARTERS IN THE SOUTH

For the manufacture of

BEE-KEEPERS' SUPPLIES.

Dunham and Root Foundation a specialty. Italian Queens and Bees from March to November.
☞ Send for my Illustrated Catalogue.
5Ctf **PAUL L. VIALLON,** Bayou Goula, La.

ITALIAN BEES AND QUEENS.—One Queen, not tested, $1.00; tested, $2.00. Bees, one colony, $7.00; five colonies or more, $6.50 each.
S. A. SHUCK,
33D2t BRYANT, Fulton Co., ILL.

THIS PAPER may be found on file at Geo. P. Rowell & Co.'s Newspaper Advertising Bureau (10 Spruce St.), where advertising contracts may be made for it in **NEW YORK.**

OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

VOL. XIX. CHICAGO, ILL., SEPTEMBER 12, 1883. No. 37.

OLDEST BEE PAPER IN AMERICA
THE AMERICAN BEE JOURNAL
ESTABLISHED IN 1861

Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

☞ The Editor of the BEE JOURNAL being unable to attend the National Convention, it will be represented by the Rev. W. F. Clarke, of Guelph, Ont., who is duly authorized to take subscriptions and orders for any of our publications.

☞ Mr. James Heddon has been on a tour up into Northern Michigan, in order to recruit his health, and the Dowagiac *Times* contains a long letter from him concerning his trip, which is interesting and humorous.

☞ We have received a catalogue of "Holland Bulbs and Plants for fall planting," from Hiram Sibley & Co., Rochester, N. Y., and Chicago, Ill. It is nicely gotten up and beautifully illustrated.

☞ The firm name of Crocker & Blake, under which E. E. Blake and F. L. Ripley have transacted business for the past ten years at Boston, Mass., is changed to Blake & Ripley. This is the honey firm of Boston.

☞ "The New Zealand and Australian *Bee Journal*" is the title of a new bee periodical published at Aukland, New Zealand. It is well edited by a progressive bee-master, and should receive a hearty support by the bee men of Oceanica. It is edited and published by Mr. H. H. Hayr, Monthly, at 6*s*. a year, and contains 12 pages and a cover.

☞ Articles for publication must be written on a separate piece of paper from items of business.

Reduced Fares to Toronto.

We have received from President D. A. Jones, the Programme of the Toronto Exhibition, and Mr. Jones writes us that he has had Thursday, Sept. 20, set apart as "American Visitor's Day," in honor of our American visitors.

We have had several inquiries about excursion rates from Chicago to Toronto, as mentioned by Mr. Jones in *Gleanings*, as follows:

> Announce return tickets at single fares on all railroads in Canada from the 17th to the 22d of September; 1⅓ fares for excursion tickets from the 10th to the 22d of September. I am arranging hotel accommodations. Urge every one who possibly can get here, to come. There will be special excursions from many points in the United States very cheap, to the Falls and Toronto. I hear of one from Kentucky, Cincinnati, Pennsylvania, New York, Chicago, etc., but cannot get particulars yet.

We have made inquiries at the Grand Trunk Railway offices in Chicago, and they know nothing of it. We can get the regular Excursion Return Tickets from Chicago to Toronto for $20, but none both ways for one fare, as Mr. Jones mentions.

Regular excursion tickets from Cincinnati to Niagara Falls, good until Oct. 28, can be bought for $15. Excursion tickets from any part of the South or Southwest to the Louisville Southern Exposition can be had, or from Louisiville to Cincinnati Exposition. In this way, if in no other, Toronto, which is only 30 miles from Niagara Falls, may be reached cheaply.

President D. A. Jones, under date of Beeton, Aug. 25, 1883, writes us as follows:

> I have received a letter, of which the enclosure is a copy, from Mr. Hill, Manger of the Toronto Industrial Exhibition, which is the outcome of an application which I made to him to secure reduced rates for bee-keepers in the State of Michigan. As it would receive publicity through your JOURNAL, perhaps you will be kind enough to give it insertion. There are single fare rates for the whole week of our convention.
>
> D. A. JONES.
>
> BEETON, Aug. 25, 1883.
>
> H. J. HILL, ESQ.—*Dear Sir:* Replying to yours of the 15th inst., I would say that we do not wish to advertise any reduction from regular rates, but if there are any on our line who apply to you, and you will refer the application to me, I will furnish them with certificates on which they can obtain tickets to Port Huron or Detroit, and return at excursion rates.
>
> Yours truly, D. EDWARDS.

We have written to Mr. Jones to try to get an order on the Chicago Office of the Grand Trunk Railway to sell us as many tickets as are needed at the rate for one way for the round trip, and it will pay those who go to either write to us, or call at this office *en-route*.

☞ The new Postal Notes are now obtainable, and should be sent in letters for all small sums. Each of the 6,500 money-order offices have been supplied with books containing the Postal Notes. New York received 20 books, and the other offices from that number to one book. Each book contains 500 notes. In addition, each office has been furnished with a plyer punch and blanks, to be used in the business. A uniform fee of 3 cents is charged for each note, payable at the office of issue. The office at which the note is made payable must be selected by the sender, and the note is payable at that office only. Each note is made payable to the bearer, and in this respect the note is of the nature of a legal tender. It is no more safe than it is to send postage stamps or bank bills in letters. Absolute safety can be had only when regular money orders are obtained.

There is now no excuse for sending postage stamps for small sums, except at offices too small to issue the Postal Notes or Money Orders. Be sure to get these Postal Notes drawn on the *Madison St. Station, Chicago, Ill.*

Hunting Bees in the Woods.

Mr. C. Norris, of Traverse City, Mich., writes as follows:

Being a reader of your valuable paper, the Weekly BEE JOURNAL, I am very anxious, and desire that some of your readers who have had successful experience in hunting wild honey bees, would give their experience in detail; what kind of feed to bait them on, and take the bees from their tree and bring them home sucscessfully, and the best bait to use that bees will come to and carry off when the flowers are giving a flow of nectar, and oblige one wishing to learn to capture wild honey bees.

Mr. F. M. Johnson gives his experience in hunting bees as follows:

You require a small box, which can be made of any kind of wood. The box is of a slanting shape, and should be made according to the following dimensions: Bottom 4x6 inches; sides, 4 inches at one end beveled down to 1½ inches at the other; end pieces, one, 4x4 inches, the other 1¼ deep by 4 inches long. The top should be a separate piece, and made as follows: Width, 4 inches, whole length 12 inches; cutting down 4 inches on end for handle, and inserting a glass 3x1 inches, flush with the under side at the other end, as near the end as convenient.

The box should contain a piece of honey comb about 1¼ inches in thickness, which should be scented with bee bait (the directions for making this are given below), covering the bottom of the box. Taking the box in the left hand, and the cover in the right, and approaching the bee while at work on the flower or shub, you insert the box under the bee, and quickly putting the cover on the top (in such a manner that the light can shine in), you have the bee secure in the box; then put the box on a stake 3 or 4 feet high, taking care not jar the box more than necessary. Then shove the cover down so as to shut out the light from the glass, when the bee will go to work on the honey, which can be ascertained by holding the ear to the box, as it will cease its "humming" as soon as it commences on the comb. Then the cover can be taken off and the bee will remain on the honey. Then take a position where you can have an unobstructed view of the box and its surroundings, and wait for the bee to come out, which it will do in from one to three minutes, and commence circling in the air, gradually enlarging the circles until it finds its latitude, at which it will immediately start in a direct line for its home, and here care must be taken to accurately mark the direction it goes. You must now wait for a short time, when the bee will return and re-enter the box, which it will repeat as long as the box remains. If the tree should be near by the other bees will accompany it on its second or third return; if at a great distance it will take a longer period for the bees to "double up."

If you have gotten 15 or 20 bees at work on the line you can safely take the box to a point as far distant, in the course the bee has taken, as you choose, being careful not to pass where the bee is likely to tree, as they will not follow the other way. Now, open the box again, and if you are on the line the bees will find it in a very few minutes. If they do not you will know that you are off the line, or have passed the tree, and should move your box to a point that you know is on the line. This is to be repeated until you run the bee to its tree.

If you have but a few bees it will be necessary to shut them in the box and move them in this manner from 30 to 60 rods at a time, then open your box and wait for them to go and return. This is to be repeated until you have found the tree.

Cross lining is important. If anything should prevent you from following the bee in a direct line from where you first start it, you can move the box a distance to the right or left and start it again, by which means you can center the bee on some prominent object, whereby you can invariably locate the tree within a radius of 5 or 6 rods.

Half an ounce of tincture of annis mixed with a half dozen drops of oil of organum, to be kept in an air-tight-bottle.

Instead of using honey in your box, put a quantity of granulated sugar in a bottle and dissolve it with cold water until it becomes a thick syrup, and fill the comb in the box with this liquid, which is better than the real honey.

Ontario Convention.

The third annual general meeting of the Ontario Bee-Keepers' Association will meet in the City Hall, Toronto, on Tuesday, the 20th day of September next, during the second week of the Industrial Exhibition. As the North American Bee-Keepers' Covention meets at the same time and place, it has been arranged that the two bodies hold joint meetings in discussing matters pertaining to our common interests, as the leading bee-keepers of America are to be present. This will, undoubtedly, be the most interesting meeting of apiarists ever assembled in Canada. The venerable Mr. Langstroth and all the prominent bee-men of the United States are expected to be present. A profitable time is anticipated, and a good turn-out requested. The convention will last three days. A meeting for the purely business work of our association will be held sometime during the convention, of which due notice will be given.

R. MCKNIGHT,
Pres. Ontario Bee Association.

☞ The Cass County Bee-Keepers' Association, organized on the 15th of August, will meet on the 10th of October, 1883, in Logansport, Ind. All persons interested in bees and honey are respectfully invited to come. DE WITT BROWN, *Sec.*

The Curse of Adulteration.

The *Prairie Farmer* discusses the subject of food adulteration in the following strain, and indicates the remedy:

In Great Britain the laws are stringent and more rigidly enforced than elsewhere, but still it is admitted to be a great evil even in the "United Kingdom." In Germany the extent to which adulteration of food, and almost everything which enters into commerce is carried, is appalling. The most of the wines brought from Germany are villainous imitations of pure articles, loaded with drugs and unfit to be taken into the stomach. We do not know what we drink, nor hardly what we eat, nor can a physician predict with any certainty the effect of his prescriptions on account of their adulteration. Community at large is in a measure to blame in this matter; indifference on the part of the public enables those who engage in these nefarious operations to ply their vocations with impunity. The laws on the statute books against the adulteration of articles of food and drink are, therefore, almost a dead letter. Unless complaint is made, the public authorities take no notice of these things, and no private citizen cares to take it upon himself to make complaints of the manufacture or sale of such articles, and thus the disreputable business goes on in every direction. There is scarcely an article of food, except fresh vegetables and fruits, that is free from adulteration. Seemingly many persons engaged in these pursuits have deluded themselves into believing that such tampering with food has become legitimate, from the fact that the great public permits itself to be imposed upon with impunity. Nevertheless, the whole business is neither legitimate nor honest. It is a species of fraud that ought not to be tolerated. Articles are sold for what they are not, and very often they contain deleterious and poisonous substances that should never enter the human stomach.

We might fill our columns with analyses made by chemists in this country and Europe, of adulterated articles now sold as human food, embracing nearly everything in use for that purpose, but it is unnecessary. Suffice it that flour, butter, lard, sugar, coffee, tea, spices, canned fruits, and other leading articles of diet are especial objects of the adulterators' arts.

Who will point out the remedy for this gigantic evil? We would call the attention of the State Board of Health to it in Illinois. Perhaps there are cases of the use of poisonous ingredients in some of these fraudulent imitations or adulterations of food, which would bring those who are producing them within the purview of that body's authority, and lead to a few wholesome examples of condign punishment for infractions of the law in such cases made and provided.

Local Convention Directory.

1883. *Time and Place of Meeting.*

Sept. 12.—Eastern Indiana, at Richmond, Ind.
M. G. Reynolds, Sec., Williamsburg, Ind.

Sept. 12-14.—Tri-State, at Toledo, Ohio.
Dr. A. B. Mason, Sec., Wagon Works, O.

Sept. 18-20.—North American, at Toronto, Ont.
A. I. Root, Sec., Medina, O.

Sept. 20.—Ontario, at Toronto, Ont.
R. McKnight, Pres.

Sept. 20-21.—Western, at Independence, Mo.

Sept. 26.—Tuscarawas Val., at Newcomerstown, O.
Herbert Denman, Sec., Coshocton, O.

Oct. 6.—Marshall Co., at Marshalltown, Iowa.
J. W. Sanders, Sec., Le Grand, Iowa.

Oct. 9, 10.—Northern Mich. at Sheridan, Mich.
O. R. Goodno, Sec., Carson City, Mich.

Oct. 10.—Cass County, at Logansport, Ind.
De Witt Brown, Sec.

Oct. 17, 18.—Northwestern, at Chicago, Ill.
Thomas G. Newman, Sec.

Oct.—Northern Ohio, at Norwalk, O.
S. F. Newman, Sec.

Nov. 3.—Mahoning Valley, at Newter Falls, O.
L. Carson, Sec.

Dec. 5-6, Michigan State, at Flint.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

Bee & Honey Show at Lexington, Ky.

Messrs. Williamson & Bro. made an excellent display at the Lexington Fair, and were highly complimented on every side. The following notices were in the Lexington papers:

Mr. Russell White, of Maysville, a prominent young bee-keeper, who attended our Fair Wednesday, said he never saw such a beautiful display of honey before, as the display made by Messrs. Williamson & Bro., of this city. Mr. White had just returned from the great Southern Exposition at Louisville, and saw several honey displays there, and all combined were nothing compared with the display he saw at our Fair.

The display of honey by the Messrs. Williamson, was the finest and most complete on exhibition, and shows the excellent taste of our enterprising townsmen, whose 7 colonies of bees in this city alone, gathered 1,800 pounds of this beautiful honey.

Mr. White said if the Messrs. Williamson had taken their display to Louisville, they would beyond doubt, carried off the premium, which was $50; but they preferred to remain at home and carry off the blue ribbon.—*Evening News.*

The first display that struck our attention upon entering the Hall building was Williamson & Bro.'s display of honey of all descriptions in and out of comb, some dark-colored and rich, and some as clear as an octagonal diamond. Mr. Williamson was awarded the premium unanimously, and a beautiful silver medal hung from the top jars within the casing.—*Gazette.*

Williamson & Bro. made one of the largest collections and handsomest displays of honey ever seen at the Fair.—*Transcript.*

The National Convention.

The National Bee-Keepers' Association, will hold its Annual Convention in the City Hall and Council Chamber in the city of Toronto, on Tuesday, Wednesday and Thursday, the 18th, 19th and 20th days of September, during the second week of Canada's Great Fair. All the railroads in Canada will issue tickets during this week, good to return, up to Saturday night 22d, at single fare for the round trip. Special excursion rates will be arranged from various parts of the United States, of which due notice will be given. Those who intend being present may be kept posted on the latest excursion rates, etc., by addressing me, and also that I may arrange hotel accommodation. Private lodgings will, if possible, be secured for those who desire it, and every effort will be made to make everybody comfortable. A grand meeting is anticipated. D. A. Jones, *President.*

☞ The quarterly meeting of the Marshall County Bee-Keepers' Association, will be held at the Court House, in Marshalltown, Iowa, on Saturday, Oct. 6, at 10.30 A. M. Subject for discussion, "Fall and Winter Care." All interested, in this and adjoining counties, are invited, for we hope to have a good meeting, and one of benefit to all.

J. W. Sanders, *Sec.*
Le Grand, Iowa.

☞ The next regular meeting of the Mahoning Valley Bee-Keepers' Association will be held at Newton Falls, O., on the first Saturday of November, 1883. L. Carson, *Pres.*
E. W. Turner, *Sec.*

The "Bad Boy" Abroad.—We have just received from the publishers a book with the above title, giving the humorous experiences of a Bad Boy in Europe. It will drive the "blues" miles away, and is warranted to create laughter in the hearts of those who never laughed before. It is handsomely illustrated and bound. Price, paper cover, 25 cents; bound in cloth, 60 cents, and it will be sent to any address, post-paid, upon receipt of the price, by J. S. Ogilvie & Co., publishers, 31 Rose street, New York.

☞ A Watertown (N. Y.) man, who has kept an account of the weather, claims that it invariably repeats itself, and gives the following as the result of his observations, viz.: All years ending in 9, 0 or 1 are extremely dry; those ending in 2, 3, 4, 5 or 6 are extremely wet; those ending in 7 or 8 are ordinarily well balanced; those ending in 6 have extremely cold winters; those ending in 2 have an early spring; those ending in 1 have a late spring; those ending in 3 and 4 are subject to great floods.

☞ The Rev. L. L. Langstroth has been invited to attend the Northwestern Bee-Keepers' Convention to be held at Chicago, Oct. 17 and 18, and accepts in the following language:

"About the invitation to attend the Convention at Chicago, and your very kind invitation to me to share your hospitalities, friend Newman, allow me to say, I accept both with great pleasure, and if nothing unforeseen should prevent, I will be glad to make the personal acquaintance of the Northwestern bee-keepers.

L. L. Langstroth."

Honey and Beeswax Market.

Office of American Bee Journal,
Monday, 10 a. m., Sept. 10, 1883.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—The demand for extracted honey is exceedingly dull; for comb honey, only fair; arrivals are plentiful. Stocks are large in the hands of corn merchants and others. Our own supply is larger than ever, and, for the present, we cannot compete with commission merchants. We may have to offer lower figures. Our prices so far were 7@9c. for extracted, and 14@16c. for comb honey on arrival.

BEESWAX—Arrivals of beeswax are good at 25@28c., and the demand is fair.

Chas. F. Muth.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 18c. Dark and second quality, 14c.; extracted white clover in kegs and barrels, 11c.; dark, 8c.

BEESWAX—Prime yellow, 30@31c.

H. K. & F. B. Thurber & Co.

CHICAGO.

HONEY—Comb honey has been bought with more freedom this week and prices of last week have been fully sustained. The cool weather has started up the usual fall trade, and activity is the order of the hour. In selecting out the best consignments (with the exception of one round lot taken by merchants from Dakota Territory), our demand is chiefly local. Extracted honey has not been sought for to any extent, yet there is an improvement over last week in the amount sold. Comb honey, extra white 1 lb. sections, 18c.; comb honey, extra white 1½ to 2 lb. sections, 15@17c.

BEESWAX—Steady and quiet, at 25@35c., as to color, etc.

R. A. Burnett, 161 South Water St.

SAN FRANCISCO.

HONEY—There is a moderate supply of comb and extracted of common quality, but offerings of extra choice comb are very light. The sales being effected are within range of unchanged figures. White to extra white comb, 16@20c.; dark to good, 10@13½c.; extracted, choice to extra white, 7½@8½c.; dark and candied, 6½@—

BEESWAX—Wholesale, 27@28c.

Stearns & Smith, 423 Front Street.

ST. LOUIS.

HONEY—Quiet sale. New comb 14@15c.; fancy small packages higher; strained and extracted 7@7½c.

BEESWAX—Easy, at 24@25c. for choice.

W. T. Anderson & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—New honey continues in good demand at 18@19c. for choice 1 lb. sections, and such are readily placed as fast as received; 2 lbs. not so active, at 16@18c. Second quality sells 14@17c. Extracted not in demand.

BEESWAX—None in Market.

A. C. Kendel, 115 Ontario Street.

BOSTON.

HONEY—We quote our market at 18@20c. for 1 lb. white clover; 18@19c. for 2 lb. white clover. Extracted is in good supply, and selling from 9@10c.

BEESWAX—Our supply is gone; we have none to quote.

Blake & Ripley, 57 Chatham Street.

CORRESPONDENCE

For the American Bee Journal.

Non-Excellencies of the German Bee.

T. A. HOUGAS.

Mr. Osburn is correct in saying, on page 408, "there are few that have the boldness to come forward and advocate the good traits of character of the German bee" (not the blacks). His next sentence is, "I know that one who has the independence to advocate the good qualities of the German race of bees, must expect to call down upon his head the scorn, the disapprobation and disgust of the great mass of bee-keepers of to-day." While we are not disposed to "scorn" or "disapprove" any one for their views on any subject, yet we beg to disagree quite frequently. In this case we must disagree upon the good (?) qualities of the German race of bees.

"In the first place they excel as comb builders." While we must admit the truthfulness of this statement in a large degree, yet it is not strictly true, all points considered. For an instance, take a colony of German bees and place them in an empty hive; let them fill it with comb, brood and honey; then take a colony of Italian bees, place them in a similar condition. As soon as both are full of comb, brood and honey, place them in the August sun, and see which combs are the first to give away. I have seen hives that were filled by the German bees, standing side by side of those filled by the Italians, and the contents of the former were all melted down, while the latter stood it all right.

"They excel as rapid workers to draw out foundation;" perhaps they do; but I can see no difference.

"They excel as pioneers to strike out from the brood-chamber (and out of the queen's way) to store their honey;" yes, and they excel in striking straight out for you, when you lift a frame out of the hive.

"They excel in keeping their hives full of workers to gather the crop;" this has never proved true, in the least, under my observation.

"All other conditions being favorable, they excel as non-swarmers, when you give them plenty of room." "All other conditions being favorable." 'Tis well said; they need favorable conditions.

"When you give them plenty of room." Again, well said; who would not excel under such circumstances?

In the above mentioned article there is nothing told but the good (?) qualities of the German bee, but he does not stop to tell that 100 German bees to every one Italian bee will take wing while handling. Mr. O. forgot to tell that an Italian bee will live and grow fat on flowers that a German bee would starve to death on. Perhaps he does not rise early enough in the morning to see that the Italians are at work from one-half to three-quarters of an hour earlier in the morning, and as much later in the evening than the German race. It seems to me that this would make considerable difference in a whole season's work. All are too familiar with the bee moth to need any notice. If Mr. O. tries the cross he speaks of, I would advise him to lay in a supply of bee veils, gloves and smokers for mutual safety.

Henderson, Iowa, Aug. 27, 1883.

◆

Rural New Yorker.

The Outlook in Apiculture.

PROF. A. J. COOK.

In the way of growth and real progress, bee-keeping compares well with other manual labor pursuits. It is capable of proof that in the past ten years the number of bee-keepers, the product in honey, and the cash value of the proceeds of the apiaries in the country have more than doubled. The apiarian apparatus, and the methods of manipulation have also, in many respects, been entirely revolutionized. The last decade knew nothing of extracting, as practised to-day; nothing of our exquisite sections for comb honey, nothing of the valuable comb foundation. The associations devoted to apiculture number more in single States to-day than they did in the entire country ten years ago. We have nine periodicals ably conducted, one of which is a weekly. There are four or five excellent books which are selling by thousands. And our agricultural associations, instead of offering a few cents, or, perhaps, a dollar as a premium for honey, and sandwiching the honey in between syrup and sugar, now give most liberal premiums, and in some cases furnish a separate building for the exhibition of honey bees and the varied apparatus belonging to the apiary.

This growth is not the result of over-praise, as some assert. True, as with all pursuits, success finds a ready tongue, while failure hides its head. Still it is true that as many who enter this field thoroughly prepared by study and practice, reach the goal of their aims as in any other business or profession. From one to two thousand dollars are enough capital to invest in the business. This capital, rightly managed, is sure to give a return of from 100 to 150 per cent. One person can care for 100 colonies of bees, and not work hard for more than three months of the year; while with a competent assistant for three months in the year he can care for double the number. I think few apiarists of skill and experience would agree to sell the average product of each colony for $15. We see then, that in the small amount of capital invested and the proceeds from the well managed apiary, apiculture takes high rank.

It is true that with a large apiary, the labor for May, June and July, and possibly for August and September, is really arduous; but when it is remembered that there are many ladies that successfully manage and care for quite large apiaries, we cannot doubt but that with wise management the labor may be reduced, so as not to be a grievous burden. Some of the ablest apiarists in our country are quite delicate women, who undertook apiculture to brace up declining health. In it they found health, money and pleasure, surely a worthy trio.

Many declaim against apiculture as an avocation. Only the specialist, say they, should keep bees. This would take from our ranks Dzierzon, Langstroth and many others of our first apiarists. One of our graduates who by profession is a preacher, wrote me a year ago that the proceeds of his bees exceeded his salary. Last year his honey brought even more; and this spring he sold $1,150 worth of bees, and had 80 colonies remaining. Another graduate has a farm and also keeps bees. I asked him a few days since why he did not sell his bees, as he was speaking of too much work. "I had better sell my farm," he said, "as my bees pay the best."

Apropos of the above, it is said, that if one wishes to learn bee-keeping, he had better go to some large apiarist and let the college alone. Reason and statistics argue otherwise. Culture, or a well trained mind, wins in every race. Bee-keeping demands good judgment and trained observation. The college course tends to develop both. Many of our graduates are now keeping bees, and all with marked success. Four of these have a national reputation, and two are known in all bee-keeping countries.

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For the American Bee Journal.

The Black Sage of California.

A. W. OSBURN.

On page 427, of the Bee Journal, is an article taken from the California *Rural Press*, on "Honey Flora—White Sage." The writer cannot be as well posted about the honey-producing plants of California as he might be, or he would not have failed to give the black or button sage credit for what is justly its due. The two sages (white and black) stand in about the same relation to one another that the white clover and basswood do to one another. The nice white comb honey that goes on the market is called white clover honey, while in all localities where basswood is plenty, I do not think there is one ounce of white clover to every 10 pounds of basswood honey. So in California with the two kinds of sage, bees will not work on white sage on a range where the black sage grows. The latter yields honey in a much larger quantity than the former, and of a much finer quality, and yields all day, from daylight till dark; and I doubt if in the whole world better honey can be produced than comes from the black or button sage; clear as a crystal; almost white, with a good body, and in flavor it is impossible to get anything finer.

The white sage yields honey in the forenoon, but not much in the afternoon. It is thin when compared to that which comes from the black, and in color and flavor it does not rank in the same class with the former at all.

I know whereof I speak. I have seen the two grow on the same bee range, very many times, but not on the same ground. For the habits of the two plants are as unlike as need be. The black sage chooses the sides of mountains and foot hills. It can hardly, if ever, be found on flat land, but the highest peaks of the coast range of mountains in California, seldom get too high for the black sage to thrive and do well, and this is one of the best evidences of its superiority as a honey plant. It is a long and well-established fact, that the best honey producing plants grow on the highest land. The white sage is a lover of the bottom lands of the canyons, along the banks of streams, very rarely getting 200 yards from high water mark. It throws up a number of stalks from the root every spring, that bloom the same season, and then die. It does not resemble a bush or shrub, but has the appearance of a weed. It is a most profuse bloomer,—while the black sage is a bush, a shrub, with hard solid wood, hence the substantial foundation for the best honey in the world to come from. When there is plenty of rain the black sage blooms for six or eight weeks, yielding honey like but very few plants do yield, and of a quality that is XXX.

Water Valley, N. Y.

For the American Bee Journal.

The Season in Southeastern N. Y.

HOWARD T. BUSH.

I began the season with 41 colonies, spring count; it was very cold and wet all the spring. Apple bloom came the last of May. My bees gathered some honey from it, and about that time I transferred 23 colonies, and I fed them the waste honey that I obtained from those that I stimulated to brood-rearing. I worked them on Mr. Doolittle's plan, and when my honey harvest came, on June 6, my bees were very strong, but it was cold and wet. Raspberry bloomed on June 6, and my first swarm came out on the 9th, and I began to extract on the 15th; and from then until the first of July, I took off 1,000 pounds of honey (700 pounds of comb and 300 pounds of extracted). White clover came in bloom about June 10, but it was so very wet that the bees did not work on it. In the last week in June, sumac came, and I never saw such a bloom. The weather became clear, and I never saw bees gather honey so fast. On July 4, my bees began to kill the drones, and in one week you could not see a single drone. On July 15, basswood bloomed, but there is not enough here for bees to make any more than a living, and hardly that, so my bees have been idle from July 20 until about two week ago; then buckwheat bloomed. About Aug. 1, it became very dry, and we have had no rain to speak of since; we have cold nights, so cold that bees cannot work until 8 a. m.; they work while the dew is on, and then lie still the rest of the day. We have had two frosts this week; the bees just about make a living. I shall not get a pound of buckwheat honey; goldenrod is coming in bloom, but if it stays dry, I shall get no honey from that source, so I think that my honey harvest is over for this season. I used two-pound, one-pound and half-pound sections. I sell two-pound and one-pound sections for 15 and 20 cents per pound, and half-pounds for 25 cents a pound, in my home market; and I get 10 cents for extracted. I have sold all of my half-pound sections but a few that I want to exhibit at our county fair, on the first of October. I mail a few bees from my apiary. I want to know what kind of bees they are. Are they the brown German or black bees? The queens are very large, about one-third larger than Italian queens.

Monticello, N. Y., Aug. 31, 1883.

[They are of the brown German race.—Ed.]

Read before the Maine Convention.

Profitable Pasturage for Bees.

ISAAC F. PLUMMER.

By request of one of the members of this association, I have taken up this subject to give you a few thoughts on my experience and observation in regard to planting and cultivating flowers, trees, shrubs, etc., for artificial pasturage for bees.

I have not had great experience in this line, but I have had enough to know that to a certain extent it pays to plant for bees, and when we are planting fruit trees and small fruits, we should remember we shall some day reap a rich harvest of honey as well as a harvest of golden fruit, and thus reap two profits to pay for our labor. I believe, and have always thought that orcharding and the culture of small fruits should go hand in hand with bee-keeping for the reason of the honey which fruit trees will produce when they are in bloom. So let us greatly extend our orchards, and in a few years we shall see our bees getting more honey, and that we are getting more and better bee pasturage in our State.

There are but few farmers and bee-keepers in our State who have not more or less waste pieces of land around fence corners, roadsides and side hills; and what better purpose can such pieces of land be put to than by sowing them to sweet clover, which is one of the greatest honey-producing plants we have in this country, and how much better such pieces of land would look to the eye and at the same time have the bees gathering honey, the sweetest of all sweets from the flowers that such places will produce by a little of our time and care spent in such a noble purpose. Who says it will not pay? I for one say it will pay.

Another great honey-producing plant, and one that will hold in bloom from July to the first of September or October, is a plant called "borage." It has a blue flower, and is a very attractive flower for either field or garden culture, but it needs a deep rich soil in order to grow to perfection. I sowed some in my garden last spring. It came up well, made a very fine and rapid growth and bloomed finely. It was just remarkable to see how bees worked on it. Its flowers kept dropping and kept blossoming until the dry weather dried it all up, and I know it would have kept in bloom a number of weeks longer if it had not been for the drouth. I like to see the bees work so well on this plant, that I shall sow a lot another season, if nothing prevents.

Of the other honey-producing plants that are highly recommended, some of which I know by experience are very good for bees, and will pay to cultivate on a small scale. To go with bee forage may be mentioned the following: Catnip, motherwort, boneset, figwort, spider plant, mignonette, Chinese mustard, cleome, golden honey plant, etc. I think if we give this branch of our business the same attention we give to other branches of bee culture, we soon will see our bees gathering more honey, and if we get more honey we shall get more money out of our bees. Now let us try and see what we can do to advance bee-culture in our State, and if we can do so by planting for our bees, let us do it; and if we can do so by improving our hives and honey boxes, let us do so by all means, and I know by improving our bees and breeding them up to higher standard of excellence, and at the same time give them plenty of flowers from which to gather honey, that we must be successful in bee culture in this State and in all other States. I will bring this to a close by saying to Maine bee-keepers, plant largely of honey-producing plants, and you will not be sorry for your time, pains and the pleasures it will give you, and the land that you will use for this purpose will be well improved.

For the American Bee Journal.

Bee-Keepers' Week at the Southern Exposition.

G. W. DEMAREE.

The Southern Exposition Company is composed of wealthy business men who, of course, know nothing of bee-culture. It was hardly to be expected that they would bestow special favors upon bee-keepers; hence, it became necessary to apply to the Agricultural department of our State for accommodations. The same course was pursued by the Horticultural Societies, and nobly did that department respond to our wishes. Prof. Todd, chief manager of the Agricultural department of the State of Kentucky, is a man of broad views, and so interested was he in our new (?) enterprise that he gave us special favors and attention. Had we known before hand that our enterprise would have been so lightly favored by the managers of the Exposition, and so highly appreciated by the public, we would have gone prepared to surprise the "natives." As it was, our honey and bee show was a credit to Kentucky apiarists.

The table erected for our accommodation stood in a conspicuous place; was about 5 feet wide, and covered with snow white cloth, and was extended in length as needed. Much of the honey was displayed in fancy shape, but the greater part of it was plain, neat, and attractive, and beyond question was admired most of all. People are used to gaudily labeled tin cans, and beautifully colored confections, and have learned to know that the fancy outside gives no guaranty of the purity of the article within. It seemed to me that the tin cans of all sizes were a failure, especially the very small sizes. These were covered with exaggerations in the form of labels.

It was amusing to hear the remarks made by persons in the mighty crowds that gathered about the tables to see the Honey and Bee Show. "Them little tin cans look too much like salve boxes." "O! ain't that charming honey in those square glass jars." "Those tall glass goblets are beautiful." "Look at that comb honey; wonder if the bees made it in them cases." "La, if they havn't got bees making honey right in the Exposition." "Wonder what them bees are making honey out of." "That's the queen is it? Well, now, where is the king?" "Won't they improve on honey before they are done experimenting?" This last remark was directed to me, and I answered: No, God makes pure honey, and the bees gather it from his ocean of flowers. Man makes glucose and calls it honey, and poisons his fellows for a few paltry dollars. These are the facts in a nut-shell.

Kentucky apiarists will not soon forget "Bee-Keepers' Week" at the great Southern Exposition. I would like to mention the names of the distinguished bee-keepers from many parts of the United States, who "hunted me up" to grasp my hand, during bee-keepers' week, but I could not do it without forgetting some whose memory is henceforth dear to me. I will be pardoned, however, for mentioning the name of W. S. Hart, of New Smyrna, Fla., because he came from the uttermost parts of the Union to visit us. Mr. Hart proposes to be at the Toronto Convention before he returns home. I am sure that all who meet him will not only find him a master in apiculture, but a most congenial friend and gentleman. The sessions of the Kentucky State Society were well attended, and the proceedings very entertaining. The assembly of bee-keepers was at no time very large, owing to the many things to attract at the Exposition, and from the further fact that many of the members of the society had to look after their honey and bees on exhibition. Still, Dr. Allen was heard to remark that it was the "best meeting ever held by the society."

I believe I learned something during "bee-keepers' week" about preparing honey for the market. I believe it a mistake to put flashy labels on small honey packages. It is too suggestive of the trashy goods so commonly seen in family groceries. These extravagancies have had their day, and people are getting tired of being cheated by outside appearances. The trade will have much more confidence in a plain label that gives the name of the article and the name and address of the producer.

At the honey show the competition for the first prize on comb honey was doubtless very sharp. I cannot see how it could have been otherwise, as so many fine combs so nearly alike were in the display. There was more difference, however, in the extracted. Extracted honey may be extra good, good, common and indifferent, just in proportion to the good management of the apiarist.

During the latter part of last June a neighbor of mine informed me that the "yellow bees" were working thick on his red clover. I visited the field and found my bees working busily on the red clover. Bees were gathering rapidly from the white clover at the same time. This led me to observe closely, and I believe that nine out of ten of the bees which were visiting the red clover were of the lightest strain of bees in my apiary. I thought but little about the matter at the time, as I had never got more than 20 pounds at two different times, heretofore, that I knew to be red clover honey, and this was in the comb, and gathered from the second crop of clover, and late in the season. In the former case the work was done on the red clover, in the best of the white clover harvest, and on the first crop of red clover bloom.

A short time after this I extracted some six or eight hundred pounds of the whitest and thickest honey I ever drew from the extractor. When I saw it was extra white, thick honey, I kept it by itself. From this lot of honey I made up my exhibit of extracted honey, and it took the first prize at the Exposition. Mr. Muth, of Cincinnati, sampled this honey, and expressed his belief that it was too white for white clover honey, and gave it as his opinion that it was red clover honey. I am able to identify at least 6 colonies that produced more or less of this remarkably white, thick honey. Although I have seen my bees working on red clover once in awhile, I have heretofore had but little faith in "red clover bees," and I yet suspect that the seasons must be extra good so as to fill the deep tubes of the clover blossoms pretty well with nectar in order that any bees yet imported to this country can reach it sufficiently to obtain surplus honey. Nevertheless these colonies will receive extra care for future experiment.

The Kentucky Bee-Keepers' Society has set on foot a scheme—if successful—which will be of much importance to those who contemplate making honey production a specialty. A committee has been appointed whose duty it will be to collect information as to the unoccupied fields suitable to the production of honey in our State, and about everything relating to the adaptability of the State to the bee business. The work will be published in pamphlet form by the society. It is hoped that such a work will be of the greatest benefit to those persons seeking locations for apiaries. The work of the bee-keepers' societies of our country has heretofore been too circumscribed in character. Their proper sphere is too benefit mankind, and in order to do this they must not only be progressive but aggressive in their work. Committees appointed by societies generally do nothing, simply because nothing is expected of them. The fault is with the society. The committee selected for this work is composed of Dr. N. P. Allen, of Smith's Grove, Ky.; W. C. Pelham, of Maysville, Ky.; John T. Connley, of Napoleon, Ky., to which the president of the society was added. With the untiring energy of Dr. Allen at its head, this committee will discharge its duties faithfully.

We have quite a drouth here now, and the prospects for a fall run are not at all flattering at this writing. At the honey show at the Southern Exposition, Mr. A. C. Cunningham, of Salvisa, Ky., took first prize on comb honey, and N. P. Allen, of Smith's Grove, Ky., second prize. Your humble servant won first prize on extracted, and N. P. Allen the second.

Christiansburg, Ky.

For the American Bee Journal.

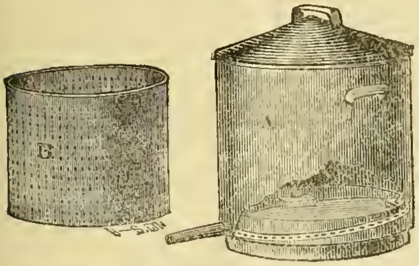
How to Clean Wax.

F. L. DRESSER.

The great demand for comb foundation, and consequent consumption of wax in its manufacture, has so destituted the market that the bee-keeper now finds little trouble in realizing twice the price for his wax that he did a year or two ago. And the prospect is, that unless beeswax is imported to this country in considerable quantities, the price will rise still higher, and bee-keepers may, ere long, consider the question of running some colonies for wax as a prime object. But with the present prices and amount obtainable, the care of wax is a question of dollar and cents to those who wish to make bee-keeping pay. With many this is considered "the woman's job," and given no further thought by them; while the women dread this annual job as much as we do the semi-annual house cleaning. Indeed, I think that I should prefer to blister my hands pounding an old dusty carpet than to burn them raw pounding hot wax through an old coffee sack. I know that I would rather eat my dinner spread on a barrel in the woodshed than to have my clothing and uncovered extremities smeared with such immovable stuff. Yet, with a little expense and proper management, no one need be made uncomfortable, and the over-burdened farmer's wife may be released of the detested duty.

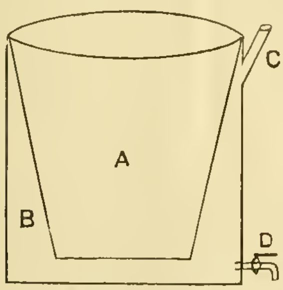
In the first place the bee-keeper should have a box handy into which to throw his old comb; that which is free from cocoons should be kept separate from the rest. If the millers commence their depredations, a little burning sulphur will disturb their feast and make you master.

Next a Swiss wax extractor should be provided (see engraving). For the sake of some who, perhaps, have not seen one of these instruments, I will attempt a brief description. It consists of a can divided a few inches from the bottom by a tin perforated with large holes near the circumference, and inclining from all directions toward a snout which protrudes from one side on a level with the tin. Above this hangs a basket made of perforated tin, so placed as to hang entirely within the holes punched in the dividing tin. The melting wax will then fall upon the tin and escape by the snout, and not leak through into the water tank below. Connect a tube from the outside with the water tank to enable you to refill the tank without removing the extractor from the stove. Cover the snout with a tight-fitting jacket open to the inside. This will prevent the wax from hardening in the snout, and save much trouble. Make a tight-fitting cover for the whole, and the thing is finished.



Swiss Wax Extractor.

You will then want two or three Moulding cans, such as the figure below.



Moulding Can.

A is a frustum shaped can encased in the cylindrical can, *b*; *c* is a tube for filling *b* with water, and *d*,a faucet, is for emptying the can; *c* and *d* connect only with the outer vessel. Thus equipped, you are prepared for business. Select a day in the fall, after the bees are prepared for winter, and you have plenty of time. Drive the women out of the kitchen, and make it as comfortable for yourself as possible. Then prepare your extractor by filling the water tank with water, and the wax basket with comb. Place a moulding can under the snout, allowing the wax to fall into it, at the same time having *b* filled with boiling hot water. When the can is full remove it, substituting another. Allow the wax to stand 4 or 5 minutes, then draw off the hot water and fill with cold water. As often as the water around the wax gets warm, replace it with that which is cold. The larger your extractor, and the more moulding cans you have the faster you can manipulate. When the cake is hard dump it out, and the can is ready to use again. The dirt will have settled to the bottom of the cake you have just taken; this you must cut off together with a generous slice of wax, so as to be sure you get it all. You can run the refuse over again and get the wax from that. The cakes are now in a convenient form for shipment, and should be sold in the early spring to some supply dealer. You can continue to get dirt from the wax as many times as you will run it through, but by running it through once it will all be prime yellow. Pure beeswax is pure white, and the slightest color is the sign of the presence of foreign matter; hence, if all the foreign matter be withdrawn the wax will be white. I have a further addition to the extractor by which I can prove my statement. A cake of the dirtiest, blackest wax that I ever saw was made white by this instrument, and it was not exposed to the sun nor any bleaching substance for a moment. But most of us are satisfied to have our wax all yellow and in convenient cakes, and this is the easiest method that I know, or of which I have ever heard.

Hillsdale, Mich., Sept. 1, 1883.

Putnam County, Ind. Convention.

The Putnam County Bee-Keepers' Association met Saturday, Aug. 18, at Greencastle. The attendance was not large, but it was enthusiastic. After the necessary business had been attended to, the different members reported the condition of their bees, and their prospects.

Mr. Tenant, of Greencastle, said that two years ago he started with but one colony. Since that time he had sold over $100 worth of bees and honey, and had six stands left in strong condition, two of them with upper story full of honey. Mr. Homan, of Russell township, reported that his bees had done well, considering the wet weather in blooming time. He had taken 675 pounds of honey, and increased to 26 colonies. He stated that there were large numbers of bees in the woods. Mr. O'Neal stated that his bees were strong, and since honey harvest had been carrying honey from upper stories to brood-chambers. He had caught a stray swarm of bees, apparently full Italians. The president said he was more certain than ever that bees were profitable property, if properly handled. His bees had done well. He had sold several stands and quite a lot of honey. The secretary remarked that he had taken some 800 or 900 pounds of honey, and had increased from 20 to 50 strong colonies with but 9 natural swarms. Had sold all his honey at from 20 to 35 cents. Others reported similar success. W Mason gave an account of a visit to the apiary of W. Smith, of Johnson county, and stated that Mr. S. had sold $500 worth of honey, and had 65 colonies of bees in chaff packed hives. Mr. S. told him his bees yielded a better income than his 160 acres of good farm land.

Our society meets the third Saturday of each month, the next meeting being Sept. 22.—*Indiana Farmer.*

For the American Bee Journal.

Bees in Shenandoah Valley, Va.

A. R. KOHNKE.

Having gone there, with the object of finding a better locality for bee-keeping than I have about Youngstown, O., I thought I would give to the bee-keeping public what I have seen and learned with reference to our pursuit.

Following the most urgent invitation of Mr. Jordan, of White Sulphur Springs, I went there the last week in July. Arriving at the Springs, which I made my headquarters, I received a most cordial welcome by Mr. E. C. Jordan, the proprietor. This gentleman has some 53 colonies of bees in Langstroth hives; but owing to his time and attention being required to look after the welfare and comfort of his guests, his bees are rather neglected. There are two springs on this place, a sulphur and an iron spring. I have met people who were broken down in health, not being able to obtain relief by any medical treatment, who had been almost entirely cured within a few months at these springs, which, if it proves anything, proves that that particular place is most conducive to health. Space does not permit me to describe that locality in detail, but Mr. Jordan will furnish very willingly any information in regard to it.

As to the bees, their main honey source is blue thistle, which, to judge by what I have seen, must be one of the best, if not the best honey plant this country produces. The honey from it, if not better, is surely equal to white clover; it being of the same color and consistency as the latter, but of a milder taste. Besides blue thistle, locust grows there in great abundance, as also the different kinds of berries, especially blackberries. But where blue thistle abounds white clover is scarce and *vice versa*.

One day Mr. Jordan and myself drove down to Berryville, about nine miles from the Springs, to visit some bee-keepers there. One of them, Mr. Diehl, who has been quite sick, hence not able to attend to his bees properly, has an apiary of about 200 colonies, blacks, Italians and Albinos. His crop was about 5,000 pounds of comb honey. Another gentleman, in the same town, had 90, blacks, hybrids and Italians, and Mr. Showers, also of the same place, has about 40. Most of the surplus arrangement had been taken off the hives, in consequence of the honey season having closed, with a faint hope of obtaining some from iron weed, which is said to yield honey some years.

Some other day I went to Winchester, it being about five miles from the Springs, to see the following bee-keepers: Mr. Brown, Mr. Slagle and Mr. Gibbens; found none of the gentlemen at home on account of a picnic excursion, but had access to the largest apiary, kept by Mr. Gibbens, who makes a business of it. I was shown around by Mr. Gibbens' son, a very accommodating young gentleman. Mr. Gibbens works his bees in a very progressive manner. He has used this year, for the first time, the one-pound one-piece sections, using comb foundation starters of a triangular shape, one corner of which nearly touches the bottom of the section. The idea struck me, that comb foundation used in this shape, might keep the bees from building little bits of comb in between, as they have a better chance of clustering than where full sheets are furnished; besides that it would be a saving of foundation to the extent of one-half. I may give right here some more of my experience in my own apiary, and what I have seen in others.

The fact that bees need large quantities of honey to produce a small quantity of wax, has led to the invention of comb foundation machines and the use of comb foundation in brood-chambers as well as for comb honey, in order to save the honey. This may be best to some extent, when honey is not very abundant, but I rather question the expediency to give full sheets of comb foundation in sections for this reason: I have noticed that, when honey is coming in slowly, the bees will draw out heavy walled comb foundation a little; but when it is coming in fast, they do not touch that heavy wall, but build new comb on the foundation given. I used the heavy-walled foundation made on a Given press, and the light-walled made on a Vandervort machine. The light-walled was always drawn out, so that the comb foundation could not be noticed when cutting the comb, but with the other more or less "fish-bone" was left, very often the whole of it. Besides this, I found after the comb was finished, the bees had wax to spare, putting it here and there in little lumps in some empty corner, but especially on the glass at the ends or sides of the sections. For the use of full sheets of comb foundation in the brood-chamber, there are other and more important reasons than the saving of honey and wax in its construction, which I need not enumerate here, as they are too well known; but for sections, I think we can use less to our advantage, using such as can be made on a Vandervort machine only, as far as I know.

Now back to Mr. Gibbens' again. He also had taken most of his sections off the hives, leaving only a small part of those not yet finished, in hopes of obtaining some honey from iron weed. On the whole, I think by what I have observed, that the Shenandoah Valley is a very good bee country, but, perhaps, no more so than many other localities where more fruit trees are cultivated, which are in great deficiency where I have been.

Youngstown, Ohio, August, 1883.

For the American Bee Journal.

Honey Crop, Marketing, etc.

B. T. DAVENPORT.

I have been much interested in reading the columns of your valuable paper this season, and especially the reports in regard to the present and prospective indications for honey. I like the idea suggested by Mr. Kendall, in last week's BEE JOURNAL, of having a barometer, or honey signal-service, a good one, providing we are careful not to exaggerate our reports, nor make out reports for the whole season at perhaps the very opening of clover, which, if the weather should be propitious, and the bloom as good as it was this season, are apt to be very flattering. It is well to be hopeful at all times, which, as far as I am acquainted, I believe is a peculiarity that bee-keepers have, but in our public reports, we want the facts, and opinions should be given as such only. We too frequently see an otherwise excellent report or letter with no date given, or if a honey report, the kind not mentioned, whether comb or extracted; such articles I mark down about 50 per cent. This was the coldest morning of the season—mercury 41°, but saw no frost. Bees have done fairly here, but too much wet and cool weather for a real good yield of honey. The most of our surplus was gathered during the latter part of June and first half of July from white clover; basswood bloomed considerable, but we obtained no honey from it; it rained nearly all the time it was in bloom, and were the heaviest rains known for years, doing considerable damage to hay that was cut, both in the stack and field. I have been working two apiaries this season, 5½ miles apart. I began with 90 and now have 136 colonies, and have taken off 4,200 lbs. of honey in 1¾ lb. sections, all white, and think there is enough on the hives of mixed honey to make out about 6,000 lbs. This is probably one of the best locations for honey in the state. I found a drone in my Carley apiary (the one away from home), with one very red eye; I saw him twice, while looking through the hive.

Auroraville, Wis., Sept. 5, 1883.

For the American Bee Journal.

Bee-Keeping in Utah.

JOHN DUNN.

Bees have not had the attention they should have this year. Some never use an extractor. One bee man told me, the other day, that he had not used one, although he has 6 colonies and is among the oldest hands at the business; but after I had shown him what I had done with 2 colonies, he said he would get an extractor; but it was like the boy, as I told him, who bought a penny purse to put a half penny in; it was too late now, to get much benefit from the extractor.

Quite a feeling has been made against the use of the extractor, through the remarks of our assessor, who said that foul brood was caused by extractors, and where they were used, foul brood was sure to exist. I talked with him on this subject, and asked him for his proof. Why, said he, I have read it in a book; but when questioned in what book, he said he could not tell where, so I told him to come and I would show him, where larvæ was pulled out, that the bees would put it back, when put in the hive; but I would not advise any one to extract from sections that had much brood in them.

I have extracted about 50 gallons of honey from 10 colonies up to date—increased to 20 this season, and if I had got my sections full of comb, I could have done better. I have used a good deal of foundation.

We should have a good flow of honey; almost every one has an orchard, and own their own house and garden lot, and since the new fence law was passed, almost every one has a patch of clover and lucern, and in the spring, if you take a walk out in the country, you will see the wild flowers, and in the fall, they shine with splendor.

I think that many would keep bees if they were not so fond of stinging, but it is the only thing they have to defend themselves with, and it is a wise provision, for, if it was not so, the poor bees would be abused many times just for fancy. I found spear mint a good thing to rub over the hands; they do not like the smell. I did intend to have 1,000 lbs. of extracted honey this season, and I do not know yet but I may get it. Bees work now on clover, squash, lucern and other plants, and are doing splendidly, so far as I have found out in this county.

Tooele City, Utah, Aug. 15, 1883.

For the American Bee Journal.

Cyprian and Syrian Bees.

B. F. CARROLL.

The anathamas hurled against the Cyprian bees by many who have not thoroughly tested them will cause many apiarists to dispose of their Cyprians before they find out their good qualities.

It is true that the Cyprian bee is a little warlike if not thoroughly understood. I have handled these bees for three years, and I find them superior to the Italians in every respect. First, they are more prolific, and hence have their hives always full of bees, and when you have the bees, you can have the honey if there is any to be had.

Secondly, they defend their hives better; it being almost impossible for a strong colony of Cyprians to be over-powered and robbed by other bees.

Thirdly, when the extractor is used they are far superior to the Italians by being so easily shaken and brushed from the combs.

Fourthly, they fly faster and further for stores, and have a longer tongue than Italians or blacks, and they work well on the cotton, and this feature alone ought to bring them into favor with the bee-keepers of the South; and

Lastly, the sun never gets too hot for them; I have seen them this year, when the thermometer was at 104° F. in the shade, working right along, as if it was spring-like weather, and my 3 colonies of Italians and one black colony were not even showing a desire to do anything but bring in a little water, and very little of that.

I have one of G. M. Doolittle's best Italian colonies. The bees are perfect beauties, and as gentle as pet chickens, and I have a host of Cyprian colonies just as gentle, and I handle without smoke or gloves.

I have about 25 colonies of Holy Land bees, and as this is my first year to give these a thorough test, I am satisfied they are almost identical with the Cyprians, and their temper is not quite so high strung. There is no doubt they will stand the test. I see some grand reports coming in from these bees from different parts of our broad domain, and it is only a question of time when these bees will be the favorites with American bee-keepers.

Dresden, Texas, Sept. 1, 1883.

Prairie Farmer.

Apiary Talks—Seasonable Hints.

MRS. L. HARRISON.

It is well to observe closely during the honey season, and ascertain from what source the supply is obtained. Where I am "rusticating," in Connecticut, near the sea-shore (Aug. 21), boneset or motherwort, goldenrod, and a species of wild touch-me-not are in bloom, and bees are apparently doing well. For several days it has been showery, and the sun comes out very hot, and the nights are warm, insuring the right condition for the secretion of nectar. Where the early potatoes were raised, Polygonum will soon be blooming. The sweet clovers (*melilot*) of the white and yellow varieties, are now ripening their seed, and it should be gathered and scattered in waste places. I saw, lately, the yellow variety which is sometimes called Bokhara clover, growing around the edge of a salt meadow and on rocky ledges. Though it is not a bad weed, it will hold its own when it has gained a foothold.

In most Western and Northern localities, the three or four weeks preceding frost bring on flowers which often afford the very best pasturage of the year. During this late honey flow, encouragement should be given to the rearing of brood, so that there may be plenty of young bees to go into winter quarters. Sometimes the brood-nest is almost filled with honey, and the queen cannot find a cell in which to lay; a part of the combs should be extracted and returned. Sometimes this fails to insure brood-rearing, as we have found such combs in a few days (during a big flow) to have every cell glistening with honey. We lose our bees the coming winter, "charm we ever so wisely," but we will stand a much greater chance of preserving them if we look well to them now. Some colonies, although prosperous the past season, have queens whose usefulness has departed, and who are decrepit with old age, and should be superseded with a young vigorous one, able to withstand wintry blasts. All after-swarms have young queens, and if they are too small to winter, they might be wintered with an old stock, by first removing the old queen. Colonies that are found to be queenless, or have done laying queens, should have queens given them or united.

Many people complain of moths destroying their bees, when they only moved in when the house was empty, from defect or loss of queen.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Bees Balling their Queen.

Will James Heddon please inform me why my bees balled a virgin queen about 12 days old; also, why they balled a dollar queen, which I introduced about 6 weeks ago, and was laying nicely ever since, and was laying when they balled her? They started queen-cells at the same hive. I took her out and put her in a nucleus, and she was laying the next day.

RICHARD GRINSELL.

Baden, Mo., Aug., 27, 1883.

ANSWER.—Bees ball strange queens and queens that for any cause (and some causes are as yet unknown) they are jealous of. Why they should have been entertaining a "sidewise" feeling toward your 12-days old virgin queen, I do not know enough about the minor circumstances to tell. Perhaps because she was aiming at becoming a wrinkled, cross old maid. Workers are quite often suspicious of introduced fertile queens for many days after they begin to lay, and often pounce upon and kill them upon the least provocation, such as opening the hive, when if they had been left undisturbed, they would have acted like dutiful children. I should think a week time enough to lay aside all this jealousy. I have found that to suffice as a rule. I have had colonies ball their queens on opening the hive; queens that were mothers to every bee in the hive. I have never known a case of the kind, but what the colony was in some way slightly out of perfectly normal condition; a little spring sickness, or clipped queen, or something of the sort.

Wide Frames.

In a recent number of your JOURNAL Mr. Heddon says the wide frames are being superseded. Will he be kind enough to tell us by what, with details sufficient to enable a man of ordinary understanding (not a mechanic) to make them for trial.

RUSTICUS.

ANSWER.—The broad frames are, with many of our leading and recognized most intelligent apiarists, being laid aside for the case system. I cannot, in this space, fully describe the case that I use and prefer, but I will say that the broad frame supers differ from the cases, inasmuch as that the cases, instead of taking frames at all, receive the sections between partitions, without the use of frames or separators. I will refer you to cut Fig. 1, Sec. D, page 659, BEE JOURNAL for 1882.

SELECTIONS FROM OUR LETTER BOX

The Fall Crop.

Bees are storing honey a few hours in the middle of the day. The heartsease and goldenrod bloom is abundant, but the weather is too dry, and the nights too cool, for a large flow of honey. A good rain and warm weather would give us a heavy flow. The honey crop in this part of the State is not a heavy one, although in a few localities, where strict attention has been given, a fair crop will be secured.

REUBEN HAVENS.

Onarga, Ill., Sept. 4, 1883.

Horse Balm Honey.

Enclosed find a plant for name. I have exhausted my botanical resources without being able to name it. Bees work on it freely, and it undoubtedly yields a large amount of honey. I have a suspicion that the honey is bitter. The plant grows in rich woods. It is not very abundant.

M. MAHIN.

New Castle, Ind., Aug. 28, 1883.

[The plant is the widely disseminated Horse Balm (*Collinsonia Canadensis*). It is hardly possible that the honey is bitter. The plant belongs to one of the most important families (*Labiatæ*) of honey producers, and is itself pleasantly aromatic.—T. J. B.]

Bees Working on the Spanish Needle.

In the spring of 1883, I had 40 colonies of bees, all Italians but 3. I did not get any clover honey, but got about 600 pounds of linden honey, and increased to 72 colonies. I have not obtained any honey since Aug. 1, though the bees are doing well now, on Spanish needle and buckwheat.

WM. T. SCOTT.

Mill Grove, Mo., Sept. 4, 1883.

Sand Wasps.

I send you a hornet that I saw with a fly in its fore feet. I never saw one like it before. Please say what it is, through the BEE JOURNAL.

J. M. HIBBARD, JR.

Athens, Ohio, Aug. 10, 1883.

[The large insect found holding in its forefeet a bee, is one of the sand wasps (*Pompilidæ*), which store their nests with insects, to be used as food by the young. Usually a single species of insect or spider is selected by each kind of wasp, but I am not aware that this or any other wasp stores its nest exclusively with honey bees. The most remarkable thing about their method of hunting is that the wasp stings the prey in a particular nerve centre, in such manner that the captured insect is rendered entirely helpless, but is not killed. In this condition it is packed with others in a hole dug in the ground, accompanied by several eggs of the wasp. When these eggs hatch the young find in the stung insects food still perfectly fresh, because alive, but entirely at their mercy.

Along with the above, in the box, was a dog-day cicada (*Cicada caniculau's*). It is much like the 17-year "locust," but appears every year. It is quite harmless, except that it bores twigs of trees to deposit its eggs; as soon as hatched the larvæ enter the ground and live on the roots of plants.—T. J. BURRILL, Champaign, Ill.]

Bee-Keeping in Minnesota.

As I am sending for 100 copies of "Honey as Food and Medicine," I will report something of what my bees are doing, and it is a big report for Minnesota, but not in the least over-drawn. My account shows 317 pails of honey. These pails will hold from 15 to 18 pounds each, making in all about 4,755 pounds of extracted, and I have besides 1,624 pounds of beautiful comb honey. This amounts to 6,379 pounds without taking into account the strainings from the uncapped, which would average a pailful a day. I began the season with 32 strong colonies, and kept them warm and well fed during the spring. I now have 90 splendid colonies, 40 of which were not looked through during or since basswood bloom. There are 12 with boxes on that have some sections completed, 2 that have the entire 12 two-pound sections nearly full. I have some colonies that have not swarmed this season. I have a record of 3, 4, 5, 6 and even 7 swarms from one colony. The one giving 6. its first swarm cast three, one of which went into another hive and was killed; but I saved two, making an increase of 8 from that colony. I had combs for all increase. J. E. CADY.

Medford, Minn., Aug. 31, 1883.

Syrphus Flies, etc.

Enclosed find three flies and a bee.

1. I found the flies hovering around the hives, evidently persuaded in their own minds that, if they had their rights, they ought to live there. The bees did not appear to mind them much. What are they?

2. Of what race is the bee enclosed? I am often puzzled about these stripes. How many stripes has this bee? My bees should be Italians, but I see every once in a while the 15th amendment to the constitution there. R. J. KENDALL.

Austin, Texas, Aug. 26, 1883.

[The insects are the prettily-banded, useful *Syrphus* flies, whose larvæ prey upon plant lice. They do the bees no harm.—T. J. B.

After a bee is dead and "mashed up" in a letter, it is hard to tell much about it. If it had "stripes" they are not discernible now.—ED.]

Borage as a Good Honey Plant.

You may put down borage as an extra good honey plant. It commences to bloom in June and keeps up till the hard frosts. My bees have worked at it unceasingly since basswood harvest closed, and are still at it. Last year it was green until the end of October. It is very hardy, and is a perfect weed when it once gets into a garden.

C. W. YOUNG.

Stratford, Ont., Sept. 6, 1883.

A Worker in a Queen-Cell.

The JOURNAL is a welcome visitor to our home every week, and while perusing its columns, last night, I found an experience somewhat like one I had not long since. I have reference to a "Curious Freak of Bees," by A. Rickenbacher, on page 433 of the BEE JOURNAL. A few days ago I had a nice lot of queen-cells that I thought would hatch in a day or two. I lifted them out in the sunshine to see how nearly ready they were to hatch, and to my surprise several had already emerged from the cells, and were walking around on the comb. I cut out all the cells that were not uncapped, and when I had put one in each hive or nucleus that I had prepared, there was one left. I cut it open. and found in it a worker bee in the prime of life. I think that worker bee crawled into the cell just when the queen got out; the cap not being cut clear off, sprung shut, and the bees sealed it. A. R. NISBET.

Dobyville, Ark., Sept. 1, 1883.

Honey Already Candied.

I send you a sample of my honey. It has all candied or turned to sugar. Will you please tell me, in the BEE JOURNAL, why it candied so, and can I winter my bees on it? I started last spring with one colony of bees; the bees swarmed three times, and the four colonies have gathered about 300 lbs. of honey in the boxes, and body of the hive, and it is all candied or turned to sugar. Will the bees winter on a syrup made by melting up the outside combs, adding a little water and skimming off the wax? Other bee-keepers living near here, are complaining of their honey candying, like mine. E. HAMILTON.

Centre Conway, N. H., Sept. 4. 1883.

[Some honey will "candy" much more readily than that gathered from other kinds of bloom. Linden honey candies very quickly after being removed from the hives. You do not say what it was gathered from, but it is evidently caused by the peculiar flowers from which it came. You can use it for wintering, either as it is, or by making it into a syrup, as you suggest.—ED.]

Good Honey Harvest in Maine.

Bees have done uncommonly well in Maine, this year. I have one swarm that came out in June that has gathered 135 pounds of honey, mostly in one-pound sections. I am 77 years old. LUCIAN FRENCH.

Dexter, Maine, Aug. 30, 1883.

Queens with Scarlet Wings.

I discovered a new kind of queen (to me) in the last part of May. I took the same queen and inserted it in a colony of bees, and the colony swarmed twice, and I received 175 pounds of honey from each. I think that these queens are more profitable than Italian queens. I think that I will transform my whole apiary with these bees; the queens have three yellow stripes, and their wings are scarlet. Please give me some information about the same.

PROF. HUGO SONTAG.

Cucamongo, Cal., Aug. 31, 1883.

[It is evidently another "case of sporting," many of which have heretofore been reported in the BEE JOURNAL. The regulation "bands" show them to be Italians.—ED.]

A Short Crop.

The crop of honey from this section is very short. Basswood was a failure. A colony weighing 6¾ lbs. of bees, gathered but 15 lbs. during basswood bloom. The fall crop, so extraordinary last season in the flow, is about as extraordinary the other way, this season. "In a good season every bean-pole sweats honey, but in a bad one, no flower secrets any;" so said our German friends across the water; and the two seasons have made the demonstration here. JESSE OREN.

La Porte City, Iowa, Sept 5, 1883.

Western Bee-Keepers' Association.

The first annual meeting of the Western Bee-Keepers' Association will be held at Independence, Mo., Sept. 20 and 21, 1883. The association being situated in the centre of one of the best honey-producing sections of the country, and easy of access from all parts of the country, it is desirous that as many bee-keepers as can possibly attend will meet with us, and help to make it as interesting and enjoyable as circumstances will permit. In connection with the general business of such meetings, the members of the association have made arrangements for a Bee and Honey Fair, free to the world. The following premiums are offered. Members of the association will not compete for premiums offered by itself.

By the Association.

Best display of honey (comb and extracted) not less than 20 lbs. of each, in marketable shape	$25 00
Best 25 lbs. of comb honey	10 00
" " " extracted "	10 00
Best queen, with her bees	10 00
Best display of apiarian implements, including all the principle fixtures used in the apiary	15 00

Special Premiums free to all.

By the business men of Independence: Best 50 lbs. of comb honey in the best marketable shape, $50.00.

By the *Sentinel:* Best package of comb honey not over 2 lbs., one year's subscription.

Judges not members of the association: All articles for display or premiums must be entered on the first day of the meeting.

Parties from a distance, who may wish, can consign their goods to either of the members of the committee. The members of the association will do their very best to provide entertainment for all persons who may visit us.

J. D. Meador,
L. W. Baldwin,
C. M. Crandall,
James A. Jones,
P. Baldwin.
Committee.

☞ The next meeting of the Tuscarawas Valley Bee-Keepers' Association will be held at Newcomerstown, Ohio, on Wednesday, Sept. 26, commencing at 10 a. m. All interested are cordially invited to come and bring anything for exhibition that will interest bee-keepers.

J. A. Bucklew, *Pres.*
Clarks, Ohio.
Herbert Denman, *Sec.*
Coshocton, Ohio.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the Bee Journal.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

How to Create a Market for Honey.

We have now published another edition of the pamphlet on "Honey as Food and Medicine," with more *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy 5 cents, postpaid; per dozen, 40 cents; per hundred, $2.50. 500 will be sent postpaid for $10.00, or 1,000 for $15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit. Try it, and you will be surprised.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a statement of account every week.

Trial Trip—25 Cents.

As the season for Fairs has arrived, and wishing to be able to reach several thousands of the old-fashioned beemen, and by the aid of the Bee Journal to lift them up to higher ground, adopting newer methods and progressive ideas, we make the following very liberal offer: We will send the Weekly Bee Journal *three months on trial, for 25 cents.* In order to pay for getting up Clubs, we will give a copy of Fisher's Grain Tables, or Scribner's Lumber and Log Book, to any one who will send us five trial subscriptions (with $1.25); for a club of *ten* we will give a cloth copy of Bees and Honey; for a club of 15, a cloth copy of the 7th edition of Cook's Manual of the Apiary; for a club of 25, we will present both the Manual and Bees and Honey. If any one wants these Books for nothing, here is on excellent opportunity to get them for a little exertion.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 50
" 200 colonies (420 pages)	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

☞ Do not send coins in a letter. It is dangerous and increases the postage unnecessarily. Always send postage stamps, for fractions of a dollar, and, if you can get them—*one-cent* stamps; if not, any denomination of postage stamps will do.

Special Notice.—We will, hereafter, supply the Weekly Bee Journal for one year, and the seventh edition of Prof. Cook's Manual of the Apiary, bound in fine cloth, for $2.75, or the Monthly Bee Journal, and the Manual in cloth for $1.75. As this offer will soon be withdrawn, those who desire it should send for the book *at once.*

Bingham Smoker Corner.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent post-paid for **$1.75**. Address,

BINGHAM & HETHERINGTON,
Abronia Mich.

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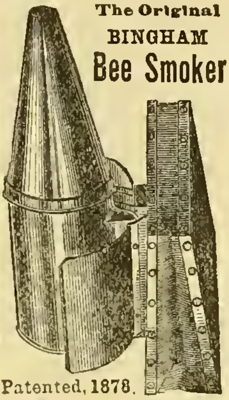

Patented, 1878.

CYPRIANS CONQUERED. — All summer long it has been "which and tother" with me and the Cyprian colony of bees I have – but at last I am "boss." Bingham's "Conqueror Smoker" did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham.
G. M. DOOLITTLE.
Borodino, N. Y.,
Aug. 15, 1882.

EXCELLING ALL.—Messrs. Bingham & Hetherington, Dear Sirs:—I am now selling your Smokers almost exclusively. You are excelling yourselves in smokers all the time.
Respectfully,
J. G. TAYLOR,
Austin, Texas, May 10, 1883.

THE VERY BEST.—The Bingham "Conqueror" Smoker is the very best thing I have tried in that line.
M. M. LINDSAY.
Fulton, Tenn., July 24, 1883.

◆

During the following three months, Bingham Smokers will be sent post-paid, per mail, on receipt of the following prices:

The "Doctor"..	(wide shield)	—3½ in. fire tube,	$2.00
The Conqueror	(wide shield)	—3 in. fire tube,	1.75
Large...........	(wide shield)	—2½ in. fire tube,	1.50
Extra...........	(wide shield)	—2 in. fire tube,	1.25
Plain...........	(nar. shield)	—2 in. fire tube,	1.00
Little Wonder..	(nar. shield)	—1¾ in. fire tube,	.65
Bingham & Hetherington Uncapping Knife..			1.15

With thanks for letters of encouragement, and the absence of complaining ones, we tender to our thirty-five thousand patrons our best wishes.
Very Respectfully Yours,
BINGHAM & HETHERINGTON.
Abronia, Mich., June 1, 1883.

Our Premiums for Clubs.

Any one sending us a club of **two** subscribers for 1 year, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For **three** subscribers, with $6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For **four** subscribers, with $8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For **five** subscribers, with $10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

Books at Fairs.—Those who make an exhibit at Fairs will find that an assortment of Books and Pamphlets would sell and leave them a profit for handling. We will send such, postage prepaid, at 25 per cent. discount; or if the purchaser pays express charges, we will supply any of our own publications at 40 per cent. discount.

◆

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

◆

☞ The new two cent rate of postage for letters goes into effect on October 1. Three cent postage stamps will then be but little used. For all fractions of a dollar sent to us hereafter we should prefer either *one-cent*, or else five or ten-cent postage stamps. Do not send coins in any letter.

◆

Fairs.—To any one exhibiting at Fairs, we will send samples of the BEE JOURNAL and a colored Poster, to aid in getting up a club. The Premiums we offer will pay them for so doing. For a club of 8 subscribers to the Monthly BEE JOURNAL, or 4 Weekly, we will present Dzierzon's Rational Bee-Keeping, price $2.00.

◆

☞ Do not let your numbers of the BEE JOURNAL for 1883 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference

◆

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

◆

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey* at Fairs, will sell almost a fabulous quantity of it.

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

FDN. MILLS. 10 INCH $ 15.00
W. C. PELHAM,
MAYSVILLE, KY.
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OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

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THE AMERICAN BEE JOURNAL

Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

Bee and Honey Show at Toledo, O.

As we promised a year ago to attend the above Exhibition, and our health improving some, we concluded to go—the "change," and meeting with companions and friends, with a subsequent visit of a few days to friends in Ohio, inviting us to brave the journey.

At Toledo we met a host of friends, among whom were Dr. A. B. Mason, Mr. C. F. Muth, Hon. I. N. Cotton, Messrs. Aaron Benedict, H. H. Overmeyer, C. H. Christiancy, P. H. Puhl, Dr. H. Besse, A. Gander, A. I. Root, H. B. Harrington, E. E. Hasty, J. Forncrook, and J. F. Hart, of Florida, and a host of others whose names we cannot now recall from Ohio, Indiana, Michigan and five other States.

The Fair was good, and the exhibit of bees, honey, wax and apiarian supplies all that could be wished.

The Convention of bee men was enthusiastic and interesting. As the secretary will give a report of these sessions, we will not forestall that report, but will simply state that a more enthusiastic set of men we have seldom met.

Altogether, the Bee and Honey Show of the Tri-State Fair will be an "educator" of the people of the surrounding country, which will tell on the consumption of honey, for a long time to come, and greatly aid in the development of the honey market.

☞ Do not let your numbers of the BEE JOURNAL for 1883 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference

Baltimore Bee and Honey Show.

In the Baltimore *Sun* of Sept. 7, we notice the following concerning the honey exhibit at the Fair at Baltimore, Md.:

> One of the most attractive exhibits at the Fair is the apiary, in charge of Mr. Charles H. Lake, proprietor of the Sunny-Side apiary, on Greenmount avenue. Mr. Lake has on exhibition a lot of fine Italian bees in glass cases or frames, showing the bees at work and the movements of the queen bees, which attract much attention. He has also on exhibition a hive of bees which were allowed the free use of the grounds, and the owner handles them with all the freedom of pet canaries. He has receptacles for honey in the shape of hearts, shields and stars, and has trained the bees to fill them so as to make novel ornaments for the table.

The Commercial *Advertiser* remarks as follows:

> The apiary, in charge of Mr. Chas. H. Lake, had many visitors, however, in spite of the bees flying about. The ingenious idea of making the cells for the bees was illustrated there. Sheets of wax were passed between two rollers, and came out with the cells already designed. The bees were all of the Italian variety. In one hive the swarm was free. The glass cases of another were placed upon seperate stands, and all the processes in the life-history of the bee could be seen. The queen, easily recognized from her large size, was industriously depositing eggs in some of the cells; working bees were preparing other cells for eggs. Some of the young bees, having passed from the larvæ state, were gradually working their way out of the cells in which they had been imprisoned, fed in the meanwhile by the workers. From one hive of the bees 245 pounds of honey have been obtained in a single season.

This is the way to aid the sale and consumption of honey. There is nothing like attractive exhibits to call attention to the honey.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey* at Fairs, will sell almost a fabulous quantity of it.

Honey-Producing Plants.

Prof. A. J. Cook, in the *Rural New Yorker*, when advocating the advantages to be derived from planting for honey bloom, says:

> There is probably no subject in which the bee-keepers of to-day should take a deeper interest than this one. Honey plants are capricious, and only give up the precious nectar at such times as dame nature's mood is agreeable to them. Let it be too wet, too dry, or too cold, and the flowers yield not one drop of the coveted sweets. We see then, that a constant succession of honey plants, from the time of the opening of the willows and maples in April, till the frost licks up the last honied secretion from the asters and the golden rods, will not only yield greater profits every year, but often such a succession is absolutely essential to any success.

☞ The Illinois State Fair will be held in Chicago Sept. 24 to 29. Indications are that this year's Fair will eclipse all preceding ones. Almost all the railroads will bring passengers at 1⅓ rates. We hope there will be a large Bee and Honey Show there.

☞ It is a fact that glucose will kill bees if you attempt to winter them upon it, either in liquid form mixed with honey, or sugar syrup, or in the form of candy.—*Planters' Journal.*

☞ The Editor of the BEE JOURNAL being unable to attend the National Convention, it will be represented by the Rev. W. F. Clarke, of Guelph, Ont., who is duly authorized to take subscriptions and orders for any of our publications.

☞ An English paper says that "Mr. Firth, a Radical member of Parliament, is the largest bee-master in England. He is the owner of from 80,000 to 100,000 bees." As that is only about *two* good colonies, we expect there is a "huge joke" somewhere about that ambiguous announcement.

Essentials in Wintering Bees.

Some time since we noticed the fact that J. B. LaMontague, Esq., of Quebec, had published a book in French, on Bee-Keeping. The following is a translation of what he has to say on wintering bees :

If there be an important subject full of interest to the bee-keeper, it certainly is that of wintering. We have seen whole apiaries, and the best prospects disappear in a single rigorous winter.

It concerns us then to consider this question attentively, and to adopt some method which may diminish if not to cause wholly to disappear the numerous losses, to which we are subject every year. The bee-keeper who succeeds in wintering must keep none but strong colonies, and a good colony in the fall should have at least four frames literally covered with bees. I do not mean that you should destroy weak colonies, for that is a ruinous position as I have elsewhere shown. The latter have not enough young bees, and consume relatively more honey than strong colonies. Are also wintered with difficulty, and when they survive are liable to be robbed in the spring. It is well to unite weak colonies in the autumn, if not before done. As to populous colonies which have not sufficient honey (which may happen from drouth), the bee-keeper should, before taking them in, feed them by means of a bee-feeder. Schnch's bee-feeder is a simple little trough in compartments 12 inches long, and is adapted to the opening so as to permit the access of bees from within and exclude them from without. You can use waste honey, maple sugar, or syrup made from sugar, but not molasses. Sugar of the country, which is soft, sown and placed in empty frames, will answer the same purpose, but be on your guard, and do not feed them with inferior sugar, such as glucose or corn sugar.

Each colony ought to have from 25 to 30 pounds of sound honey, that is to say, capped over, the combs of which the cells are not closed over in the fall contain unsound honey, unfavorable for wintering—these should be emptied with an extractor, and replaced by combs firmly capped over. All the colonies should be taken into the cellar in the month of November, or by the beginning of December, at the latest, if the season be mild, which cellar should be dry and perfectly dark ; keep up a temperature from 45° to 50° Fah. Dry and dark cellars are those in general use in the houses of the farmers, and are in general very favorable to the wintering of colonies.

It is also necessary to create an air current at the top of the hives by means of openings, or of absorbents, which may draw off the excess of moisture without at the same time, causing a current of air which would prove fatal to the bees. Bees emit during the winter an enormous quantity of watery vapor, which, if it do not find an outlet, penetrates the honey, renders it acid, and causes that fatal disease, dysentery—6 or 8 inches of straw placed directly upon the comb frames are a sufficient absorbent, or you can obtain the same result with sawdust. Some cry out against the ventilation of hives, relying upon the fact that they always winter with success without giving ventilation to their hives. It is possible that they then succeed in a cellar exceedingly dry,and where there is not the least moisture, but such conditions are seldom met with, and we affirm that ventilation is an essential thing to successful wintering. If you have no cellar, you can winter your colonies in a cool and dark room where there is a temperature from 40° to 50° Fah., but you must then give greater ventilation to the hives. You should not confine the bees in their hives by closing the openings by means of wire cloth, unless you winter them in the house. One would at first sight be led to believe that bees would be more at ease in a warm, than in a cool place, but the fact is otherwise, and one will lose many more by a high temperature than in a low one. I have already had proof of that fact. Thus it is necessary as far as possible to winter your colonies in cellars, combining the conditions before mentioned. It is better to put you hives in winter quarters early than late, in a dry time than in a wet, and when they are placed disturb them the least possible.

Overstocking a Locality.

Mr. G. W. Neihardt writes as follows to the Bee-Keepers' *Guide* on this subject :

Much has been written by eminent bee-keepers on the subject of overstocking any locality with bees, some holding that any place capable of sustaining a few colonies, is also capable of supplying a large number ; others claiming that a field is capable of furnishing only a sufficiency for a definite and limited number. I am not able definitely to settle this question to my entire satisfaction, yet I must confess that my inability to secure such unprecedent yields of honey in " poor " seasons as that secured by Mr. Doolittle and others, forces me to conclude location has much to do with the profits arising from the keeping of bees.

A locality where only one or two honey-producing plants are the sole reliance for surplus, would certainly be an unsafe one in which to attempt to raise honey as a money-making business. White clover, which is the main reliance in many sections, is liable to be "winter-killed," or the drouth to cut it short, or wet weather to wash the nectar out of it. Fruit bloom is seldom so abundant as to furnish more than an aid to breeding, while the autumn flowers are very uncertain, and likely to be cut off by early frosts.

Cool weather very frequently prevents the storing of much honey in supers from late pasturage. It is, therefore, of the highest importance to those desiring to engage in bee-culture for profit, to look well to the honey supply in the place they locate. The more diversified and abundant the honey-producing plants, the better the location. Where, however, several of these are to be definitely depended on, the rest may be supplied by cultivating such plants as produce honey in abundance.

It should not be a matter of doubt to apiarists, whether it pays to cultivate any plant for honey alone. Experiments should be made, and that subject settled definitely. If half the time and talent that is now expended in experimenting with hives, bees, and manipulations of bees, were expended in the production of honey-producing plants, there would be less complaint of dysentery, hard winters and unprofitable seasons. The honey supply should not be made a matter of luck any more than the other matters pertaining to bees, only so far as it should be beyond the bee-keepers' control to furnish it. Any locality almost could be made a good one. Whether, however, sufficiently so as to make it repay all the cost, experience alone can tell.

☞ The next meeting of the Tuscarawas Valley Bee-Keepers' Association will be held at Newcomerstown, Ohio, on Wednesday, Sept. 26, commencing at 10 a. m. All interested are cordially invited to come and bring anything for exhibition that will interest bee-keepers.

J. A. BUCKLEW, *Pres.*
Clarks, Ohio.
HERBERT DENMAN, *Sec.*
Coshocton, Ohio.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

☞ The quarterly meeting of the Marshall County Bee-Keepers' Association, will be held at the Court House, in Marshalltown, Iowa, on Saturday, Oct. 6, at 10.30 A. M. Subject for discussion, " Fall and Winter Care." All interested, in this and adjoining counties, are invited, for we hope to have a good meeting, and one of benefit to all.

J. W. SANDERS, *Sec.*
Le Grand, Iowa.

☞ Look not mournfully into the past—it comes not back again ; wisely improve the present, it is thine ; go forth to meet the shadowy future without fear, and with a manly heart. —*Longfellow.*

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

Fertile Workers.

We extract the following from the *Indiana Farmer* on the cause and cure for these pests:

Bees should never be allowed to go any length of time without a queen, or without eggs or brood from which to raise one in case their queen gets lost while on her bridal trip. Colonies that have been queenless for any length of time are very apt to contain fertile workers. The evidence that these pests are present, will be found in the promiscuous manner in which the eggs are scattered around in the comb, sometimes one, but oftener three or four in each cell. The bees will cap the brood over, but the cappings will be convex as other drone brood is. They will even build queen cells over the brood, but the eggs will produce only drones. There is no way of distinguishing these fertile workers from any of the others, unless you should see them in the act of laying, and should you destroy one or two there is likely to be a half dozen others left in the hive. A colony containing fertile workers will neither accept a queen if given them, nor raise one for themselves if brood is given them for that purpose. It is generally better to double up a colony in this condition with one containing a fertile queen. If the frames be taken some distance from the hive, and all the bees be shaken off on the ground, the most of them will go back to the old stand, leaving the fertile workers on the ground, when if a frame of brood is given them they will raise a queen. A better plan is to crowd the bees on as few frames as possible on one side of the hive, and close up with a division board. On the opposite side of the board hang two or three frames of brood and bees from another colony, and a queen if you have one. They will soon discover the better condition of things on the other side, and quickly unite with them.

Plan and Foresight of Bees.

Prof. A. J. Cook, of the Michigan Agricultural College, has this in a late number of the New York *Tribune* on the above topic:

The phenomenon of bees swarming is well understood. Most of the worker bees rush out of the hive sometime between 8 a. m. and 4 p. m. —usually from 10 a. m. to 12 m.— circle about in the air for some time, apparently waiting for the queen, which seldom leaves the hive till the bees are well out, and then all alight in a dense cluster on some bush, tree, or other support. If the queen refuses to leave the hive to join the bees, or if from defective wings she is unable to join them, they soon break ranks and return to the hive. After a space varying from half an hour to two hours—I have known swarms to remain clustered all night—the bees take wing and fly rapidly in a straight line to the new home. This is certain, as bees have often been followed in a bee-line to the adopted home. Others have been followed for a long distance, always in a right line, when the chase had to be abandoned. Two interesting questions arise: Why do bees cluster? and How do they know of the home toward which they always take a bee-line?

It has been argued that bees cluster that scouts may go in quest of the prospective home. It is also more than probable that the queen, whose organs of flight—muscles and wings which she moves—have long been inactive, possibly for more than a year, may need this rest after her brief flight from the hive, before the longer one, which may reach a distance of miles. This view is strengthened by the not uncommon occurrence of bees resting midway on their flight after flying a mile or more toward the new home. I have known several cases where bees have thus clustered apparently for the queen to rest, after flying a mile or more. This home must have been sought out either before the bees left the hive to swarm, or else while the bees were clustered. A few cases are given by European bee-keepers where a few bees have been observed about a house or tree, going in and out of some small aperture, then leaving. The next day, or possibly the next day but one, a full swarm would take possession of the pre-empted quarters.

One of our graduates, Mr. F. E. Delano, a farmer of Oxford, Mich., writes me that last Friday, while engaged in tearing down a portion of his house preparatory to rebuilding, he noticed, about 3 p. m., bees flying in and out of some holes under the chamber floor. He supposed a swarm had taken possession, but was puzzled to know when they could have come without being heard or seen. The next morning early no bees were to be seen. About 9 a. m. a large swarm came and at once entered the same openings where the bees made ingress and egress the previous afternoon. This seems clearly to prove that scouts do, sometimes at least, go out to seek and prepare the new home before the bees swarm, and strengthens the probability that clustering is not to give time for this prospecting, but the rather to fit the queen for the long journey, which from her function and habits we must consider her illy-fitted to take.

☞ The Rev. L. L. Langstroth has been invited to attend the Northwestern Bee-Keepers' Convention to be held at Chicago, Oct. 17 and 18, and accepts in the following language:

"About the invitation to attend the Convention at Chicago, and your very kind invitation to me to share your hospitalities, friend Newman, allow me to say, I accept both with great pleasure, and if nothing unforeseen should prevent, I will be glad to make the personal acquaintance of the Northwestern bee-keepers.

L. L. LANGSTROTH."

Fall Feeding for Bees.

A correspondent of the *Home Journal* details his method as follows:

Each colony should be examined, and, if out of stores, they should be fed about a pint of sweetened water every other day. This should be given them in the upper story of the hive, where other bees cannot get at it, or there will be danger of exciting robbery. This light feeding should be kept up to the latter part of September, and then the colony should be provided with their winter stores. I have found that about 15 pounds of a good article of "A" sugar is sufficient to carry an ordinary colony through till the warm days of spring.

There are many ways to feed sugar to bees, but I have adopted the following plan: Some kind of a feeder is necessary (and there are many kinds in use), and it should be cheap and simple. For handy and rapid feeding there is nothing better than a quart fruit jar and a grooved board. Cut a board 6 or 8 inches square, and with a pair of compasses strike a circle in its center about 4 inches in diameter, and cut a trench a quarter of an inch deep, similar to an old-fashioned cider platform press, and then cut grooves out to the circular trench, and the feeder is ready. The whole thing can be completed with a pocket-knife in a few minutes. To prepare the sugar for feeding, fill the jar full of sugar, then pour on warm water till the jar is full of syrup; have the sugar well dissolved by stirring it. Now put a piece of oil-cloth, or a piece of drilling will answer, on the mouth of the jar, and invert the jar and board altogether, and then slide the cloth out from under the mouth of the jar, and you have the feed in the best possible shape to be taken by the bees. I usually feed at the entrance of the hive, placing the feeders in position just after dark in the evening, and removing them early the next morning. At the start a little syrup should be strewn from the bees to the feeder, to start them, after which they will rush into the feeder like pigs into a swill pail. Keep up the feeding regularly till they are provided with sufficient winter stores. If the nights are cool, place the feeder in the upper stories of the hives. Some people seem to think that it is a risky thing to feed $2 worth of sugar to a colony of bees. But if they give 100 per cent. profit, how then?

☞ The Central Michigan Bee-Keepers' Association holds its fall meeting at Lansing, in the State Capitol building, on Tuesday, Sept. 25, 1883, at 9 a. m. All interested in anything pertaining to bee-culture are invited to attend and bring anything that will be of interest to the bee fraternity. E. N. WOOD, *Sec.*
North Lansing, Mich.

☞ Articles for publication must be written on a separate piece of paper from items of business.

CORRESPONDENCE

For the American Bee Journal.

Wintering—The Humidity Question.

JAMES HEDDON.

After reading Dr. Tinker's "Humidity" article on page 440, current volume, I am somewhat at a loss to know why he so carelessly passed by the fact that so many instances are recorded where bees come out of special repositories perfectly drenched with dampness, and the combs covered with blue mold, but with the bees perfectly healthy, and no signs of dysentery! Then, again, cases like my own, where 48 colonies put into a very dry cellar began to die in less than three weeks with dysentery in its worst form with the hives and combs all dry and entirely free from mold.

Bees about here have wintered best in the dampest winters, for these winters were the warmest ones, and the cold and confinement which are the great aggravations to the cause, were not with us in any great degree. No, the "Humidity" theory is a complete misfit for very many known instances. Mr. Arad Balch, of Kalamazoo, claimed that all upward ventilation was death, that dampness was good for bees, and all the while he made these claims, he wintered his bees with the greatest success, with everything moldy and damp; while we "dry" fellows lost ours by scores of colonies.

The Doctor's reasoning regarding the natural food and instinct of the bees does not hold good. Sugar syrup is not their natural food, but honey is; but the unnatural food is here the best. I have to thank the Doctor for his kind words regarding the object of my researches and reports concerning the cause and prevention of this trouble, and for calling the attention of bee-keepers to the fact that I am to have the "honors" of fathering the "pollen theory."

I wish to call attention to one more fact, which is, that the bacteria theory is much the same thing. My first proposition was that the cause of dysentery was "an over amount of animal or vegetable matter in the food." (I use the words "vegetable matter" not in the same sense that honey is vegetable.) I did not know whether bacteria was vegetable or animal, but rather thought it was the latter, while later developments prove that it is vegetable. Be that as it may, the two theories are very closely related, and Prof. Cook, who should be one of our very closest guessers upon this subject, yet fails to see so much fallacy in the pollen theory as our friend who sets his sections down flat on the brood frames.

To my own ear the Doctor's article savors of that knowledge of chemistry that his profession usually understands, but in his application of the same to the cause of dysentery is where I disagree with him.

The Doctor thinks pollen, because a "normal food," would not produce dysentery. What is normal is natural. Nature, with her infinite arms, embraces all that there is. Death is as natural as life. Instinct is erring in all animated nature. No animal has instinct sufficiently unerring to make it always a success. The bee has an instinct to guard against the moth that nature so kindly furnished for its benefit; still moths do destroy feeble colonies often, and sometimes strong ones. With all the Doctor's instinct and reason combined, together with his experience and memory, I dare say disease will get him before old age.

It seems quite peculiar that the Doctor's instance of experiment with the pollen theory should be kind enough to kill that and the hybrid theory all at one fire. This is what sportsmen call a "double-shot." Well, if it turns out that Dr. Mason's three years' experiments, which have convinced him that pollen eating in confinement is the cause of dysentery, and that the hundreds of producers who have had their hybrids lead all other colonies for surplus honey should be true, then we shall be forced to think that in some way Dr. Tinker is as badly mistaken regarding his pollen experiment as he is regarding setting sections flat down on the brood frames, and that his hybrids were either catch hybrids, or that his parent colonies were not of the right sort to produce the hybrid so much sought after about these days. After all, have we not theorized enough, and is it not now a question of practical experiment?

During the coming winter we shall make the pollen theory a special matter of experiment, and give it the best test upon the largest scale we have ever heard of. The moment we find we are wrong, if such be the case, we shall get right off from that hobby horse and caution all to keep away from it as they would from the heels of a mule; and, Doctor, if we find you on our bacteria horse, we shall claim him, if he seems to have any strength, by right of priority, we shall order you to dismount at once and stride your "sections on the brood frame" pelter, one that we feel sure will never "get there."

Dowagiac, Mich.

Gleanings.

Standard Langstroth Hive & Frame.

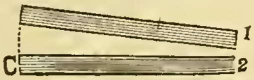
L. L. LANGSTROTH.

Before inventing my movable frames I used bars, in a hive with movable top and bottom, by which the bars could be worked to much better advantage than by side-opening doors. My latest style of bar hives were 18⅛ by 18⅛ by 6 inches deep, all in the clear. At that time (1851) honey, to bring the best price, had to be in combs built in neat glassed boxes, and this shape of the hive gave an unusually large surface for such supers. The walls of these hives were double glass, to give the dead air space, which protected the bees against extremes of heat or cold, and sudden changes of temperature. That fractional ⅛, which has puzzled so many, gave room for two strips of wood, each one inch wide by 1-16th thick, against which the double glass could be fastened with glazier's points. One pane of glass, 18 by 12, a common commercial size, could be easily cut so as to answer for one side. My movable frame hives were first made in the spring of 1852, in the city of Philadelphia—some six months before the patent, which was applied for in January, was issued. These hives were 14⅛ inches from front to rear, and 18⅛ from side to side. Early in 1853 my hives were made in Greenfield, Mass., and the first edition of my book on the "Hive and Honey Bee" was published in May of that year. The present size of hives, 18⅛ from front to rear, 14⅛ from side to side, and 10 inches deep, was then adopted. The dimensions, 18⅛ from front rear, and 10 inches deep, have never been changed; but that from side to side may vary according to the number of frames, some preferring 8, some 10, and some even more. I am correctly quoted as having said, in the AMERICAN BEE JOURNAL, in reply to an inquiry, "Considering the accuracy which may be obtained in making the frames stiff and perfectly square, I prefer the Root and Newman measurements." What I meant was, that frames could be made so stiff and square as to allow of their being ¼ of an inch longer than the old standard size, and that the ¼ inch (instead of ⅜) still left between the uprights of the frames and the front and rear walls of the hive, gave all the room needed for their proper manipulation. It never occurred to me that any one could possibly suppose that I meant my frames could be *improved* in squareness or stiffness by making them only ¼ of an inch longer! I then thought that it was quite a desirable point to gain this ¼ inch, as in ten frames it gave an increase of comb surface enough for rearing over 1,100 bees.

As such large operators as Heddon, Root and Baldridge, insist that ⅜ of an inch space between uprights of frames and hive is the least that can be safely allowed; and as hives are not unfrequently made, even by good workmen, which vary a little from the true dimensions, and further, as some kinds of lumber are badly affected by variations in the weather, I am now of opinion that ⅜ is better than ¼.

Considering the frequency and severity of my attacks of head troubles, which not only prevent me from taking any interest in bee matters, but which render any thought upon such subjects both painful and dangerous, it will not seem surprising that it is only within a few weeks that I have learned that the change in the size of the standard Langstroth frame was made to carry with it *a change in the size* of the standard Langstroth hive! I have no recollection of ever having read the article to which Mr. Baldridge thinks I ought to have responded, until I saw his reference to it in the BEE JOURNAL of Aug. 8, or I should before this not only have corrected his misunderstanding of the reason I gave for preferring that extra ¼ inch, but should have expressed my deep regret that the *size* of the standard Langstroth *hive* had been changed; not that slight changes in frame and hive are of any special importance, except as they interfere to any extent with the cardinal principle, that any Langstroth frame ought to fit in every Langstroth hive. Even after I ceased to use the double glass walls, the fractional ⅛ was retained to prevent confusion by departing even to so small an extent from the size so widely disseminated.

It is, however, very easy to exaggerate the inconveniences which have resulted from these slight variations. One will contend that the standard Langstroth frame cannot be used in the Root and Newman Langstroth hive, and many will actually prefer that size of hive for them, as giving more room for the safe and rapid handling of frames. If both hives and frames are *very carefully* made, I find no trouble in using the Root and Newman frame in the standard Langstroth hive. The great length of the top-bar of the Langstroth frame enables me, after removing one frame from the hive, to take out the others with great ease, thus:



When the frame (1) is lifted out, the end (C) of frame (2) is *drawn* toward the operator, without any lifting until the angle is large enough to remove it without danger of hitting the sides of the hive; so in replacing it the end (2) is first put on the rabbet, and (C) can then be moved readily to its place. The long leverage of the Langstroth frames greatly favors such manipulations. I would say here, that a variation of only ⅛ from front to rear, if it is on the side of making the hive *smaller* (say only 18 inches), is, for divers reasons, a much more serious matter than the extra ¼ inch; for in such hives it is well-nigh impossible to have any free manipulation of the longer frames. I am using in my own apiary the Root size of frame in the standard Langstroth hive, and find no trouble at all in doing so. I would even prefer, with hives and frames made as accurately as they should be, ¼ inch space, manipulating in the manner above described, to ½ inch, if the frames had to be squarely lifted out.

The conclusion of the whole matter seems to me to be this: The standard Langstroth hive is 18⅛ inches from front to rear, and 10 inches deep, all in the clear, and the standard Langstroth frame is 17⅜, and not 17⅝; and I advise all who make new hives, if they can do so without too much loss, not to vary at all from these measurements. I certainly have no right to demand that the parties who are using the extra ¼ inch, both for hive and frame, should return to the old standard; but I hope that, instead of calling their hives the standard Langstroth hives, they will call them the Root Langstroth hives, as Mr. Root first used the extra ¼ inch. I presume that Messrs. Root and Newman, and other hive makers, if not willing to return to the standard Langstroth, will have no objections to filling orders for Simplicity, chaff, or other styles of hives of the Langstroth standard size.

Intending in another article to give in detail my reasons for adopting my standard size of frame, I will close by saying that I no more claim perfection for it now than I did in 1853, when in the full gush of enthusiasm over an invention which I hoped would revolutionize practical bee-keeping.

Oxford, Ohio, August, 1883.

[As we promised that the discussion of the hive question should stop with the articles of Mr. Langstroth, we refrain from making any comments. We are satisfied that a universal standard frame is an impossibility in America, and, therefore, it is useless to discuss the matter any further. Let all adopt such as they prefer—ED.]

For the American Bee Journal.

A Help in Handling Brood Frames.

G. A. DEADMAN.

Those who have either used, or read of Jones' brood frames, are probably aware that on account of their peculiar construction they can be handled very rapidly, with little danger of killing bees. This peculiar construction is principally in the bottom bar, which is simply a narrow strip of wood about ⅛ by ½ inch, and being placed edgewise, is made to pass through a groove made at the bottom of each of the side pieces of the frame, and projecting behind them about ¼ of an inch, or just sufficient to allow it to be placed easily in the hive. The corners are then brought to a point. It certainly has its advantages, as it is only by carelessness on the part of the operator that any bee is injured when manipulating them. Another advantage is, that it always hangs square in the hive, and, therefore, equi-distant from either side. There is one objection that I find in its use, although I have never inquired of the originator to know whether he has experienced the same trouble. The difficulty with me is this: The frame, when in position, brings the bottom bar about ½ inch from the bottom of the hive, and as the bar itself is about ½ inch, the bees are compelled to cease building comb one inch from the bottom board, or else build past this narrow strip. This latter alternative they very frequently adopt, and are sure to do so if the frame does not hang straight with the full sheet of foundation.

I presume some will say that there is no reason why it should not hang perfectly straight, but with a deep frame, ⅛ inch is very little from the true, and yet sufficient to encourage the bees to build cells at least on one side of the comb, or rather comb with cells on one side. And worst of all, when using full sheets of foundation of worker cells, the bees will take advantage of the situation and complete it with drone comb, the very worst place they could do so, as far as handling the frames are concerned. Now, the plan I adopt, and possibly there are several others doing the same, is this: I have the bottom bar the same width as the side pieces of the frame, as is customary with the majority of frames made, and then I procure from the hardware store ⅝ inch brass window blind staples, costing 15 cents for half a pound, and sufficient for at least 500 frames. I drive one of these in each side of the frame opposite the bottom bar, and allow them to project ¼ of an inch, or not more than 5-16. By using these I cannot see but that all the advantages of that part of the Jones frame can be had without any of the objections as mentioned above, and as you will see the cost is comparatively nothing.

Brussels, Ont.

Country Gentleman.

Fall Notes About Bee-Keeping.

W. Z. HUTCHINSON.

The hurrying season is over, but there yet remains much work to be done. Comb honey should be stored in a dry, well-ventilated, and rather warm room, in order that it may become thoroughly ripened, and the honey in any unsealed cells become so thickened by evaporation that it will remain in the cells even though they should be turned upside down. Neat, smooth shipping crates should be made of some light-colored wood, and at least one side of the crate should have a slip of glass to show the honey. Although the crates should be neatly made, yet they should be so cheap that they can be given away with the honey. All propolis, or gum, should be carefully scraped from the sections. All honey should be graded, and that containing even a little dark honey should be placed in the second grade, otherwise the whole lot is liable to be classed as second grade. If extracted honey is to be sold in small pails, now is the time to put it into them, as after it has candied it is a slow, disagreeable task to put it into pails.

Many bee-keepers err in putting their honey upon the market too early in the season, and at too low a price. After reading a few encouraging reports in the bee papers, they fear that there will be a glut in the honey market, and in their efforts to secure the highest price by rushing their honey into the market before there is a demand for it, they often get the lowest price, and help to spoil the market for others. Until the fruit season closes the demand for honey is light, and bee-keepers should govern themselves accordingly. The honey should be well graded, put up in the most attractive packages possible, well taken care of, and placed upon the market when there is a demand at a remunerative price, and not before. There is one other point; before honey is shipped away to a large city, the home market should be well supplied. Supply the home market first, and if there is any left over, there will be time to sell it at some distant market. One who has never tried it will be surprised at the quantity of honey that can be sold in a home market, especially when an energetic man goes at it in the right manner. Each grocer should be furnished with a neat stand for extracted honey; also a case, with glass front, for comb honey; and unless sold outright to the grocer, he should be instructed to sell the honey at a certain price.

As I rear queens, I do not have a great deal of honey. I have at present taken off about 3,000 pounds, but have not sold more than 100 pounds. I have been too busy to even get it crated, or to put the extracted into pails, but there is time enough yet for that, as October is the best month in which to sell honey. Before selling my honey, I shall probably exhibit it, together with numerous other bee-keeping articles, at the State Fair at Detroit.

For some reason, some colonies at this season of the year are found queenless. Perhaps the large number of eggs laid during the busy season is so great a tax upon the vitality of old queens that they die, and then the young queen that the bees afterwards rear is lost in mating. Of all the methods that I have tried for introducing queens that have been long out of the hive, I have found none better than the following:

Make a cage of wire cloth by rolling a piece 3 or 4 inches square around a round stick ¾ of an inch in diameter. One edge of the cloth should be unraveled a few wires, and the long ends of the wires thus left sticking out can be thrust through the meshes of the opposite edge, then bent over or "clinched." The cage when finished is simply a wire cloth tube 4 inches long and ¾ of an inch in diameter. One end can be closed by pinching it together. The cage in which the queen has been shipped, should be opened in a close room before a window, the queen alone caught and placed in the wire cloth cage, and the cage closed by squeezing the end together. Then by moving the frames slightly apart the cage can be slipped down between two of them and held in place by pressing the combs against it. For fear the bees might neglect to feed the queen it is better that the cage be placed against sealed honey. In from 24 to 48 hours it is usually safe to liberate the queen. The disposition of the bees towards the queen is the only guide as to when it is safe to release her. If they are "balling" the cage—clinging to it like burdocks—they would kill the queen; if they are walking about over the cage in their usual unconcerned manner, they will usually accept the queen, and the cage can be opened by pressing one end in the opposite direction from that by which it was closed. After opening the cage the hive should be closed at once, and not opened or the bees disturbed again for 5 or 6 days. Opening the hives before the queen has entirely recovered from her captivity, and been completely accepted as sovereign of the hive often leads to her destruction.

Colonies that are to be united should be united now. Remove the least desirable queen, and in two days take the combs containing the brood of both colonies and put them together with the adhering bees, in one hive, and place it upon the stand occupied by the colony having the queen.

At this season of the year robber bees are often troublesome; hence caution should be used, and no temptations, in the shape of exposed sweets or queenless or weak colonies, should be placed in their way. When robbing is once started, it is difficult of control. Once more I would urge upon bee-keepers the importance of experimenting in regard to wintering. Extract the honey from a few colonies, and feed them a syrup made from granulated sugar, in the proportion of one quart of hot water to 4 pounds of sugar. The syrup should be fed during the latter part of September.

Rogersville, Mich.

For the American Bee Journal.

Appearances Are Often Deceptive.

W. H. STEWART.

A truth, often apparent to the observing bee-keeper, is, "we know not what a day may bring forth." If we could have known that the cold, wet spring of 1882 was a true index to the latter part of the season, we would have concluded that it were better to let the bees go, and get out of the business, as best we could; but we have all learned that there are "ups" as well as "downs" in life. Thus it is, that, during the storm "hope sees a star," as I have stated in my report for 1882. The season of 1882, after June 10, was very good, and we made the bees pay tolerably well.

The spring of 1883 (in Wisconsin) was more promising; we had to feed but little. Bees obtained plenty of pollen and nearly as much honey as they needed, up to June 8, and then came white clover bloom, and we took about 2,500 lbs. of white clover surplus. In the spring of 1882 we did not get 50 lbs. of surplus white clover honey.

July 13 (this season) basswood began to open its bloom, with which it was literally loaded. Reports were made from many parts of the country, giving great honey yields, and, as the organ of hope is ever flattering us, by presenting the brightest and most pleasing side of every question, how natural it was for us all to conclude that the land was sown to "flow with milk and honey" (or at least with honey).

But how about the "immense crop?" When basswood began to bloom, dark clouds, somewhat larger than a man's hand, made their appearance, and thunder and lightning, rain and wind was the order of both day and night during basswood bloom. Our bees only had half a day of favorable weather for gathering basswood honey.

On July 12, we had run all our surplus combs through the extractor, and had our sleeves rolled up, ready to take about 6,000 lbs. of basswood honey in, "out of the wet;" but we failed, and the wet came out ahead.

July 20, we opened our hives to look for a little basswood honey; we did not expect much, but we found scarce anything in the supers, except mad, ugly bees.

Now, two weeks later, nothing seems to be going on with the bees, except trying to force their way into every door and window, to get at the honey that is being handled, and doing their best to to rob each other of stores.

Again the great thunder storm has brought chilling winds and stormy indications of frost. If this state of things continues, we will have to feed most of our white clover honey back, for winter stores.

Orion, Wis., Aug. 4, 1883.

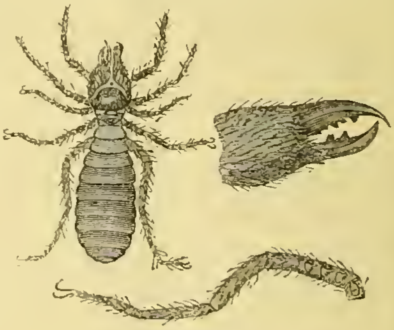
For the American Bee Journal.

A New Bee Enemy.

PROF. A. J. COOK.

The figure we here present is of a curious bee-killer received from J. D. Enas, Napa, Cal. Mr. Enas says it goes into the hives and destroys the bees.

This strange animal is related to the spiders, and more nearly to that group of the spiders containing the scorpion and grand-father-gray-beard. The name of the family is Solpulgidæ, and they are unique in the possession of very curious jaws. These have two toothed fingers, the lower one of which is movable. On the front margin of the head, which seems small when compared with the enormous jaws, are the small rounded eyes. The jaws move side-wise, while the toothed fingers move up and down. There are eight legs as with all spiders, though the anterior ones have no claws.



Bee-Killer.

The species sent by Mr. Enas is possibly Datames Californicus, Simon, though this one does not quite agree with the description given by the late Mr. Putnam in his most admirable monograph of the Solpulgidæ of America. It is nearly one inch (23 *m m*) long. The head is brown, with a light stripe in the centre. The remainder of the dorsal surface is lead color. The eyes are black, while the jaws and legs are light. The fingers and their teeth are brown, tipped with black. The femurs and tibia are brownish. At the base of each posterior leg are fine small scales. The specimen I have is a female. The reproductive slit is on the under side of the first abdominal segment; the anal one on the last.

Mr. Enas has seen several of these animals killing his bees, and I hope soon to have from him more specimens.

It is a very interesting group of animals, and it is a sad loss to science that Mr. Putnam did not live to complete the admirable work in the study of these animals, which his scholarly and thoroughly scientific habits fitted him so well to perform.

The figure shows the jaws with their toothed fingers, a posterior leg, and the animal with the jaws turned a little to one side, so as to show the teeth of the fingers.

Lansing, Mich., Sept. 11, 1883.

For the American Bee Journal.

Robbing, Fertile Workers, etc.

JOHN GOCHENOUR.

I would say for the benefit of Mr. B. L. Clements, on page 433, that I have successfully prevented my bees from robbing by inverting, or rather turning the entrance blocks end for end, so as to form an entrance 3 inches long and an inch wide, or less, according to the desperation of the robbers. By placing a small block on top, it makes a gauntlet that no robber can safely run, as they will be caught by the sentinels before they get half way into the hive. Mr. Clements gives Italians more credit for honesty than I can; when they find a hive unable to protect itself, they are like rats, and quarrel among themselves. I would be pleased to have some one explain why fertile workers get possession of the hive, and the best way to get rid of them. Are they considered hybrids because their product are all drones? I have heard it argued by a man that claims that he has been in the bee business for 12 years, that the fertile worker is a female drone; which seems very unreasonable. I would be under obligations to any who will answer the above questions fully; I would like to hear from more than one, as, perhaps, there are different views and theories upon the question.

Freeport, Ill., Sept. 5, 1883.

For the American Bee Journal.

Iowa State Fair Exhibit.

EUGENE SECOR.

At the Iowa State Fair, just closed, the finest display of honey and implements pertaining to the apiary was made which we have seen at any exhibition in the State.

The bee and honey department—assigned to one wing of Vegetable Hall—was under the supervision of Rev. O. Clute, of Iowa City, author of "Blessed Bees." It was a pleasure to witness his enthusiasm, and the willingness and courtesy with which he answered all queries, whether pertinent or not. The eager crowd kept up such a running fire of questions that he was obliged to talk all the time, or dodge the crowd and retire to his tent for a few moments rest. I was on the ground three different days, and I saw no cessation in the interest taken in this department.

Mr. Clute made a very attractive display of extracted honey—of which he makes a specialty—and of bee literature and apiarian implements, hives and bees. J. J. Kiser, of Des Moines, also made a good exhibit, including comb honey. A Fairfield apiary—we do not now recall the owner's name—took first premium for the largest and finest display of comb honey in section boxes.

A meeting was held at Mr. Clute's tent one evening during the Fair, and a State Association was formed. Mr. Clute was elected President. We may, therefore, expect to see even a finer exhibition another year.

Forest City, Iowa, Sept. 8, 1883.

SELECTIONS FROM OUR LETTER BOX

Crop Report.

The honey season for this part of the State is past. Bees have gathered nothing since the basswood honey harvest. The weather is very cold both night and day, and the stores for winter are becoming less. Bees did well for such a cold and wet season. I had 24 colonies, spring count; increased to 55, and extracted 4,300 pounds of honey from basswood; some colonies gathering 25 or 30 pounds a day. B. D. SCOTT.

Ovid Centre, N. Y., Sept. 9, 1883.

Heavy Frost.

Last night there was a heavy frost, which, I presume, put an end to the fall flowers in this part of the country. My bees have been on duty about half of the time in the last two weeks. There are several good buckwheat patches near my apiary, but last night put an end to progress in that line of business. As soon as my bees began to fly this morning, the Italians commenced war on some of my hybrids. The fight lasted about one hour, and the Italians drew off in good order. There were several hundred killed and wounded. I did not take time to count them, as they were very saucy. They gave me to understand that I was not needed in the fight. A few of my late swarms I shall have to feed. When is the best time and the best way? Please answer in the BEE JOURNAL—some one that is experienced in the business. I get the BEE JOURNAL regularly, and could hardly do without it, as it is just what every beginner wants. I was up to Columbus, last week, and found a nice display of honey and bees. Found Henry Drum, of Adelphi, on hand with all the improvements of apiculture.

R. A. ROSSER.

Nelsonville, Ohio, Sept. 9, 1883.

The Season's Work.

I have just got through taking off the surplus. My apiary consists of 32 colonies; 20 young and 12 last year's queens. I wintered 23 colonies in the cellar; they all came out alive; I lost 4 queens in the latter part of April. I have had 2,700 pounds of extracted honey; it is nearly all sold at 8 cents per pound, cash; and about 112 pounds of comb in two-pound sections; this brings 14 cents per pound in trade. This beat me out of 300 pounds, if not more, of extracted honey. I shall not try for any more. My greatest trouble is in introducing young queens, this fall. I had to make new colonies for this. I only find fault with the Cyprians; they will not accept a queen, if there is an old bee in the hive, and in 24 hours you will find drone eggs in several combs. This is a hot game for a novice to get over. I have them all right now, and do not fear the winter, whether it be cold or not. I will not have over 50 colonies to attend to next spring; I had 200 this spring, but this was too much for me to attend to.

JOHN H. GUENTHER.

Theresa, Wis., Sept. 7, 1883.

Bees in Marshall County, Iowa.

Our grand prospect for a large honey yield suddenly came to a close early in August; since then our bees have only gathered enough to keep up a good stock of brood; so now our colonies are generally strong and in good condition for a September harvest, if we have one, and so far they are making a good start, if lively work is any sign. I think a shower followed by a few warm days and we would be all right for winter stores. If we do not get it we will have some feeding to do. Some of the best honey harvests I have ever seen have been in the first half of September, therefore, I still live in hopes and shall until frost comes. I met with a number of bee-keepers at our County Fair, and all said they got none, or but little surplus during August. All thought it was almost too cold. It seems that good corn weather makes good bee weather. There was a small show of honey at the Fair. S. W. Keeler took the first premium on comb honey, and the writer got it on extracted honey. The president of the Fair promised us a special department for a bee and honey show next year, if the bee-keepers of the county would meet with the Agricultural Society at the annual meeting in January, and help make out a programme. I hope all bee-keepers of Marshall County, Iowa, who are interested, will respond. J. W. SANDERS.

Le Grand, Iowa, Sept. 6, 1883.

Gaura as a Honey Producer.

I enclose a sprig of a flower that grows wild along the roadside. I wish you would give, in the Bee Journal, a scientific description of it, and what honey qualities it possesses.

JOHN GOCHENOUR.

Freeport, Ill., Sept. 1, 1883.

[This is a rather common plant, known to the botanist as *Gaura biennis*. The only common name is that of the genus, or first word in italics. It is biennial. The first year the long leaves spread out from a center after the fashion of a turnip; the second year a branched stem 4 feet high appears, bearing small flowers and close rows of seed vessels. The pollen is stuck together loosely by cob-webby hairs or threads. Bees are sometimes bothered to free themselves from these masses, though there is not nearly the dough that there is in the milk-weeds in this respect. The plant produces some honey.—T. J. B.]

An Amateur's Tribulations.

In July I sent to Mr. James Heddon for an Italian queen, which I received Aug. 2. I placed her in an improved Langstroth hive with 4 frames of empty comb, and 6 frames of foundation. I then reversed a box hive and drove the bees (not very successfully I fear) into the hive with the new queen, and placed it on the stand from which I had taken the box hive. I placed the old hive to one side, and awaited events. The next day I found but few bees in the Langstroth hive, and a few or none in the old hive, but a box hive next to the Langstroth was and is overflowing with bees. I then removed the new hive to another part of the yard, bored some holes in the bee board, and put a hive with a late swarm on the top and stopped the entrance, thus forcing the bees to pass down and through the Langstroth hive, and commenced feeding. The next day my wife took the old box hive to the lower end of the yard, turned it on its side, and broke out some of the combs which were very black and old. I concluded to extract the wax from the comb in this hive, as it appeared to be strong and heavy, and went to work breaking out the combs, a piece at a time, finding a few bees among the combs. As I got nearer the top, I found more and more bees, when, as I got to one of the upper corners, I found a score or more of bees, and away flew my Italian queen; she sailed off majestically, but got tangled in some spider web on a neighboring fence. I then procured a glass tumbler, but on returning my queen had freed herself and disappeared; she came back, however, in a few minutes, to the hive, and I secured her; fortunately I had Mr. Heddon's queen cage, and put her in, and set the cage in the portico of the before-mentioned Langstroth hive. The cage was soon covered with bees; in the evening, just at dark, I opened the cage and drove her into the hive; this final act of the drama, occurred some ten days ago. Last Sunday, on returning from a professional call, at or near noon, my attention was called to the humming of bees in a maple tree in the yard, near the bee hives. I looked up and found a cluster of a pint or a little more about 18 feet from the ground. After trying with pail and basket in vain, I broke off the branch; they clustered close by on another limb. I broke that off, and they circled around for a short time, then followed the bush, which was laying close by the hive, and clustered on it. I shook them off, and they settled on the top of the hive. I tried to drive them in with a Bingham smoker, when they again took wing; this time they went about 60 yards, and settled in the top of a box elder. I got a ladder, went up, sawed off the top and threw it down, but they held fast. I then cut off the twig with the cluster, laid it on the frames, put on the bee board, and there they are. Two things interested me: They never offered to sting, and they are Italians. I never worked with bees so good-natured, not an angry hum from one of them. Where did they come from? There are no Italians in our neighborhood. The Heddon queen is the first. Can they be from her? This does not seem possible, nor do I think there are Italians near enough to have furnished this swarm.

THOS. MARTIN.

Coal Valley, Ill., August, 1883.

[To be sure of answering your tribulations correctly, one would need to be at the scene of action. I will venture to suggest, however, that your first mistake was in not blanketing the box hive to be forced, a few days before driving it, when the blanket could be changed to your Langstroth hive, making that and the driven box look alike, which in your case they did not, which made them go to the other box near by, that looked like their former home.

In introducing a valuable queen, do not accompany the job with other uncertain manipulations. Are we to understand that the late swarm you put on the Langstroth hive containing our queen, had a queen of their own? Whether they did or not, the proceeding was all wrong and risky to the newly-introduced queen. A little farther on, it seems your new queen is in the old box hive; this I do not understand. How you came by the Italian bees is another mystery. Undoubtedly a small swarm came to you that you found in the tree. Swarms sometimes travel scores of miles. No, it is not possible that those bees came from the queen I sent you.—JAMES HEDDON.]

Honey Crop in Nebraska.

The honey production of this season has been very light, our best colonies not gathering to exceed 50 to 75 lbs. of surplus. Prices are somewhat above the average. Comb honey is selling for 25 cts. per lb., and extracted for 16 cts.

F. E. BENEDICT.

Reynolds, Neb., Sept 11, 1883.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Bees in a Garret.

My uncle has a house with a verandah some 7 feet wide, attached to a two-story house lathed and plastered underside, thus forming the ceiling. The rafters, which project up at a suitable angle against the house, form a roof covered with tin. Of course a little garret is formed between the rafters and the ceiling. A swarm of bees has been discovered which found an entrance by a crack in the cornice, a piece of the moulding having become loosened. The presumption is, that the bees have the whole space of the garret which they can occupy as they choose. The question now is, by what means, if any, these intelligent little insects can be persuaded to abandon their present domicile and enter a hive, so that their labor may be utilized. At present we we can see no way of collecting rent from the occupants of the dwelling. Please be kind enough to answer in the Weekly Bee Journal.

HELEN L. JOHNSON.

Middle Haddam, Ct., Sept. 7, 1883.

ANSWER.—As it would require a skillful operator to take the bees, combs, etc., from the garret, and cost in repairing the same and all, more than to buy a colony, why not just let them remain where they are? They may swarm, and then hive them and keep the garret colony for a stock hive. This is how I should manage them, and the novelty and opportunity for "the folks" to exercise their marvelousness regarding the immense stores that "may be in the garret," is worth something, is it not? If they must come out, tear open the verandah and smoke the bees, cutting out their combs one by one, brush the bees into a hive, transfer any of the combs to the frames of the hive that are large and straight enough, stop up the verandah and place the hive on the ground just below, to be moved after the bees are all quiet. All the minutia of the work depends upon the condition of the place where it is to be done, and cannot be directed here.

Bees Cleaning Combs.

What is the best method of having bees clean the comb, after the honey has been extracted?

H. A. WHITTLESEY.

Newington, Vt., Aug. 27, 1883.

ANSWER.—If you have a good extractor, no such cleaning is necessary. But the best way I know of, is to put the combs into a super, or upper story, and place this over a strong colony just at night if in times of a honey dearth, and in 4 to 12 hours the combs will be all clean, and the super can be removed in the usual way.

Beautiful Honey.

Our Boston, neighboring city and home markets, are yearly filled with the most beautiful honey. The combs are snowy white, in perfectly clean, white poplar sections, filled to the corners and completely sealed. With the above I am obliged to compete in producing comb honey. My sources of honey are mainly willow, fruit-bloom, locust, raspberries, basswood and goldenrod. My bees are Italians. Quantity and quality of extracted honey, per colony, is above the average. Not so with comb honey except, perhaps, in point of flavor. Now, then, if it is management that forms the most important part in producing such beautiful white comb honey, what are the details or the fundamental law govening the same?

If fixtures, what influence do they exert on both quantity and appearance?

If location, how can I best utilize, or if needed, improve the one occupied?

If bees, must I discard my clean, sprightly, courageous Italians, and notwithstanding the protest within, endure the mothy, lazy blacks?

If Mr. Heddon will please answer the above questions through the "What and How" columns of the BEE JOURNAL, he will greatly oblige

L. H. SHEVENELL.

Haverhill, Mass., Sept. 7, 1883.

ANSWER.—My advise to you is, just make the raising of extracted honey a specialty, and adhere to the bees that you prefer. I know of locations where to raise choice white comb honey is very much more difficult than in other places only 10 miles distant, with everything else except the resource for nectar the same. It is plain to be seen that time and the Yankee will make the production of comb and extracted honey equally profitable, and a choice as to which we will produce should depend upon the fitness of our field and ourselves. If you are going to raise extracted honey for sauce, consult Dadant's little 15 cent book upon the subject. If for mechanical purposes, then a different management is advisable. Believing as I do that your flora is the main obstacle, I will not answer your questions until I may know that you are bound to go for comb honey, which I may find out by your next communication.

Preparing Bees for Winter.

Will Mr. Heddon please answer the following queries in the BEE JOURNAL in regard to box hives, as there are several around here who have a few colonies of bees in box hives:

1. In case there was not honey enough in the hive for winter, what would be the best food, and the best way to feed them?

2. How would you advise preparing them for winter, and what is the best material to pack them with?

3. Would it be a good plan to make a box a few inches larger, each way, than the hive, and set the hive in it, and pack chaff around it?

J. S. BARB.

Bristolville, Ohio, Sept. 3, 1883.

ANSWER.—1. If I had such bees in box hives, I should be tempted to take them up, considering the honey they now have, and combs for wax, rather than to feed them more dollar's worth, and then risk their coming through in a condition to make them worth what they will cost you.

2. Properly prepared, pure cane sugar syrup (if it can be got pure, which my investigations throw a great shadow of doubt upon) or honey is good food, and if the box hives have no openings above, they might be inverted and a feeder placed on the open top (previously bottom) and all removed in the morning, before the bees fly, and fixed at night after they cease flying. Feeding in a successful manner, and properly preparing the food, is one of the fine arts of bee-keeping, and if we are to learn it properly and with certainty, we need to see it demonstrated. There are so many twists and turns to be made—according to the condition of the apiary, the bees to be fed, and the weather. A good feeder is an absolute necessity.

1. Do bees gather pollen from white and Alsike clovers? I have seen them at different times working on those clovers, and at the same time they had pollen on their legs.

2. Are queens that leave the hive with second or "after swarms," mated with the drone before leaving the hive with the swarm?

3. How old are queens before they leave the hive to mate with the drone or with second or after swarms?

Bristolville, O. J. S. BARB.

ANSWER.—1. As near as my limited time has allowed me to discover, I think white and alsike clover yield pollen in such quantities that our bees do sometimes gather from it, here, but usually it affords too much honey to tempt them to gather its pollen.

2. No, the queen mates with the drones usually, about 3 to 5 days after the swarm is hived, with all after-swarms.

3. After-swarms often issue a few hours after the hatching of the young queen, or queens, that accompany them.

Dzierzon Theory, etc.

I am a subscriber of the Weekly AMERICAN BEE JOURNAL, *Gleanings*, *Exchange*, and *Bee and Poultry Magazine*. I am also owner and reader of all the books written on the science of apiculture, both in America and Europe. Have had several years practice in bee-keeping in the West Indies, and was originally taught by father Dzierzon's "Rational Bee-Keeping" many years ago; but still I find there is something yet wanted which neither practice nor theory will ever solve, namely: the proof positive that an unimpregnated egg laid by a queen bee can, or does produce a drone. This, to me, seems unnatural, for this reason: an unimpregnated egg will and must always remain an unimpregnated egg, and could never produce a bee that is capable of impregnating, as from nothing nothing must remain; the greater part of this world thinks that "nothing" really exists, and will try with strong arguments to prove it; but the very fact of its being "nothing" would not make it something, therefore would be "no where," and then, pray, where is "no where;" just fancy for a moment any thing in existence without length, breadth, width, depth or thickness, this would be "nothing," but this is not within the grasp of human imagination; therefore, as I have said, "nothing" does not really exist, consequently under this head an unimpregnated egg of a queen bee cannot, in my opinion, produce a drone bee. I am afraid that we do not as yet really understand the principle functions of her nature, although that has nothing particularly to do with the dollars and cents part of the bee business; although if we knew these particular functions more accurately, we might be able to breed up to a standard of perfection; however, as I like your style of explanations, and your reasonable answers given to all questions put, would you oblige me by answering a few through the Weekly BEE JOURNAL:

1. Are those queen-cells built over drone eggs in a queenless colony supposed to become the drones that impregnate the queen? I have had them in this apiary on the same sheet of brood that had real queen-cells built over worker eggs at one and the same time. They are easily known by their smooth surfaces, and the drone comb on which they are built.

2. Why do the bees provide such royal drones (which they must be as they are fed on royal jelly, and pro-

vided with very expensive cells) when they must know (through the use of their five senses) that other legitimate queen-cells are built at the same time? I have had them hatch in this apiary, and the colony has become very prosperous and strong. I have also seen some torn down as is done even to the *bona fide* cells. When they hatch before her majesty they get the chance of existence, but if she hatches first, some of them stand a poor chance, and are generally torn down, but not always.

3. If impregnation takes place up into the open air, who, when, where and how have they witnessed it? I think, all things considered, the impregnation question must be going on from the moment the queen has sufficient age for the purpose, or even directly after birth inside of the hive, and the queen takes a trip out for an airing before going properly to work in laying. I do not believe in fertile workers, but I do believe in a drone-laying queen, and I am afraid that they are such as are called fertile workers.

4. Is the queen impregnated "once for all," which lasts her life time, or does she renew the process each time of natural swarming, or is the business carried on constantly in the hive? I think the latter is much more reasonable to believe.

5. How can it be possible that so small a sack of the seminal fluid can prove sufficient for impregnating so many thousands and thousands of eggs laid by her during her life time, if even but of short duration? This, I think, must be constantly renewed in the hive by the drones, for the safe and prosperous keeping of the family or colony.

I must beg pardon for occupying your precious time in reading this; but I hope you will excuse me as I am a very great enthusiast in the science of apiculture, and have, therefore, applied to your better knowledge and practice on the subject. I am always on the look-out for your articles in the bee papers, and have thought often of asking you the question: Why do you not write a standard work on apiculture, embodying all of your own experience in practice up to the present time and style of working? Such a work would be worth its weight in gold. I for my part would willingly pay $5 for a copy. Try and get up such a one, and let it be in Mr. Langstroth's style, but up to the times in every respect. I hear of Prof. Cook's new book, and have sent for one. but I think you have proven to the fraternity that you "have got there." I am very sorry to hear of your winter losses, but trust you will make it up again soon. Please encourage the bee reading public with something good every time.

I am a Dane, so please excuse my English writing and explanations; but as a practical man, I presume you will understand me.

I have now working 80 colonies of the common brown bee. They have been transferred from Palm-logs into the Van Deuzen-Nellis improved (by me to suit this climate) Simplicity hives, and are doing pretty well, considering the bad season we have had this year. I am just through with this lot, and I am going to increase with 50 more colonies just brought in Palm-logs. I am doing all in my power to introduce apiculture scientifically here, and feel so happy to hear constantly of its progress in the United States and Europe.

LORENZO J. DE SOBOTKER.
Santo Domingo, West Indies.

ANSWER.—1. Prof. Cook is a much better personage to answer your questions than I am, and as you say, truly these things have less to do with our dollar and cent success, and I commenced very poor in the business, having to make dollars and cents out of it, or go hungry to bed. I have paid most of my attention to the practical part of apiculture. As I understand the Dzierzon theory, drones are always hatched from unimpregnated eggs, whether laid by an impregnated or unimpregnated queen, and that the drones hatched from eggs laid by an unimpregnated queen, whether in queen or drone cells, are in every way a perfect male bee, possessing all the functions of the same. If what we have supposed to be fertile workers were unimpregnated queens, they certainly resemble a worker bee, and may as well be called fertile workers as queens.

2. I think this is the first time I ever heard of "royal drones," and was of the opinion that when drones or workers hatched from queen-cells, it was only another of the mistakes which proves the failure of bee instinct.

3. I know of one reputable man who says he saw a queen surrounded by a whole bundle of drones fall to the earth. This man knew nothing of the modern impregnation theory. Never read a bee journal or book. Twice I have seen a queen return to a nucleus with what I took to be evident signs of recent impregnation.

4. If queens are impregnated on the wing only, then we know one impregnation lasts for life.

5. So wonderful are things in nature, when seen by the telescope or microscope, looking into the far-off in either direction, that I am not prepared to say that what might look to the naked eye as a small particle might not be divided up into thousands and thousands of particles, each efficient in its nature.

All the above has less interest to me than other themes connected with modern apiculture. Very many have asked me the same question, why I do not write a standard work on apiculture, or publish a bee journal. Let me here make my reply. I do not consider myself capable of doing either, and doing it *well*. I might associate myself with some one and get out a respectable journal, but I have been far enough behind the scenes to fully realize that he who publishes a good journal, is giving his life to his patrons, something that I am too selfish to exchange for honors or money.

Regarding a book on apiculture, in my judgment no one man in the United States has or can write a book to meet the present demands of progressive bee-keepers. Once that could be and was done by Mr. Langstroth, but to-day the demands are beyond the power of any one person to supply. I consider Prof. Cook's book worth more than its price, for its treatise on botany and entomology, but in my judgment he should have stopped there, naming his book "The Entomology and Botany of Apiculture."

Our "winter losses" are among the forgotten, as we now have 300 colonies in good condition, and believe for the first time during our 16 years experience that we are about to master the wintering problem.

Thanking you for your eulogistic words, I will say that I am continually making new determinations to make my contributions more pleasant and profitable to the reader. Your good letter needs no excuses.

Leather-Colored Italians.

Will Mr. Heddon please answer the following questions in the BEE JOURNAL:

1. Are the leather-colored Italian queens of a distinct race, or is the dark color caused by a cross from other strains of bees?
2. Will a colony of bees accept a queen that has fertile workers?
3. Will a fertile worker lay eggs in worker comb?
4. How do you manage a colony that has a fertile worker, to get rid of them?
5. Which is the best, natural base foundation or flat bottom?
6. Where can I get the Parker foundation fastener?

HARVARD T. BUSH.
Monticello, N. Y., Aug. 31, 1883.

ANSWERS.—1. The leather-colored variety of the Italian race may be thus dark colored from crossing with the German race far in the past in their native home, Italy. I do not know how that may or may not be. I do not think any one knows. This type of bee is brought from Italy, and all have three bands, and duplicate themselves generation after generation. If they are not the original Italian bee, they are certainly a fixed strain, and according to most of our leading honey-producers, the most desirable fixed strain or race of bees known.

2. Sometimes they will, but the uncertainty is too great to risk the life of a valuable queen by attempting such introduction.

3. Fertile workers lay eggs in worker combs, and when capped over the cappings project outwards.

4. In getting rid of fertile workers, we sometimes try the introduction of some valueless queen, which, if we succeed in introducing, we afterwards easily supersede by a good one. It is also advisable to introduce a sheet of brood in all stages at the same time. Many times besides all this, we take all the bees clean from the hive, carry them off 10 to 40 rods and scatter them around on the leaves or grass, that is if the hive has been queenless long enough that the bees all know the way home. The fertile worker is apt to never return, or at least we have no more trouble from her.

5. Our experiments have prejudiced us against the flat-bottom foundation. My impression is that most of our experienced bee-keepers prefer the natural base, though some still adhere to the flat-bottom.

6. Of almost any supply dealer, and I wish here to say that in my judgment the Parker fastener is yet the best device known for fastening foundation into sections.

How to Tell a Fertile Worker.

Will Mr. Heddon please explain the best way to tell a fertile worker, and also the best way to get rid of them, through "What and How" in the BEE JOURNAL. A. H. GROIN.
Elgin, Ill.

ANSWER.—I know no way to distinguish a fertile worker from other workers, unless you catch them in the act of laying, which is very seldom done. "The best way to get rid of them," see reply to Mr. Bush, and I may also add that it helps to change stands of the fertile worker colony and a good one in normal condition. I would advise this latter aid, however, only when honey was flowing plentifully.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

How to Create a Market for Honey.

We have now published another edition of the pamphlet on "Honey as Food and Medicine," with more *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy **5** cents, postpaid; per dozen, **40** cents; per hundred, **$2.50**. 500 will be sent postpaid for **$10.00**, or 1,000 for **$15.00**. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit. Try it, and you will be surprised.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a statement of account every week.

Trial Trip—25 Cents.

As the season for Fairs has arrived, and wishing to be able to reach several thousands of the old-fashioned bee-men, and by the aid of the BEE JOURNAL to lift them up to higher ground, adopting newer methods and progressive ideas, we make the following very liberal offer: We will send the Weekly BEE JOURNAL *three months on trial, for 25 cents.* In order to pay for getting up Clubs, we will give a copy of Fisher's Grain Tables, or Scribner's Lumber and Log Book, to any one who will send us five trial subscriptions (with $1.25); for a club of *ten* we will give a cloth copy of Bees and Honey; for a club of 15, a cloth copy of the 7th edition of Cook's Manual of the Apiary; for a club of 25, we will present both the Manual and Bees and Honey. If any one wants these Books for nothing, here is an excellent opportunity to get them for a little exertion.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

☞ Do not send coins in a letter. It is dangerous and increases the postage unnecessarily. Always send postage stamps, for fractions of a dollar, and, if you can get them—*one-cent* stamps; if not, any denomination of postage stamps will do.

Special Notice.—We will, hereafter, supply the Weekly BEE JOURNAL for one year, and the seventh edition of Prof. Cook's Manual of the Apiary, bound in fine cloth, for **$2.75**, or the Monthly Bee Journal, and the Manual in cloth for $1.75. As this offer will soon be withdrawn, those who desire it should send for the book *at once*.

Honey and Beeswax Market

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., Sept. 17, 1883.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—The demand for extracted honey is exceedingly dull; for comb honey, only fair; arrivals are plentiful. Stocks are large in the hands of corn merchants and others. Our own supply is larger than ever, and, for the present, we cannot compete with commission merchants. We may have to offer lower figures. Our prices so far were 7@9c. for extracted, and 14@16c. for comb honey on arrival.

BEESWAX—Arrivals of beeswax are good at 25@28c., and the demand is fair.

CHAS. F. MUTH.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 18c. Dark and second quality, 14c.; extracted white clover in kegs and barrels, 11c.; dark, 8c.

BEESWAX—Prime yellow, 30@31c.

H. K. & F. B. THURBER & Co.

CHICAGO.

HONEY—Comb honey has been bought with more freedom this week, and prices of last week have been fully sustained. The cool weather has started up the usual fall trade, and activity is the order of the hour. In selecting out the best consignments (with the exception of one round lot taken by merchants from Dakota Territory), our demand is chiefly local. Extracted honey has not been sought for to any extent, yet there is an improvement over last week in the amount sold. Comb honey, extra white 1 lb. sections, 18c.; comb honey, extra white 1½ to 2 lb. sections, 15@17c.

BEESWAX—Steady and quiet, at 25@35c., as to color, etc.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—There is a moderate supply of comb and extracted of common quality, but offerings of extra choice comb are very light. The sales being effected are within range of unchanged figures White to extra white comb, 16@20c.; dark to good. 10@13½c.; extracted, choice to extra white, 7½@8½c.; dark and candied, 6½@—

BEESWAX—Wholesale, 27@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Some little inquiry for choice comb, from grocers, at 14@16c. in fancy packages, but little or no demand otherwise. Offerings are liberal of strained and extracted, and dull at 6½@7c. Old and dark comb nominally cheap.

BEESWAX—Was selling at 25@26c.

W. T. ANDERSON & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—Comes very slowly and sells as fast as it comes at 18@19c. for best white in 1 lb. sections, and 17@18c. for 2 lb. sections. Second quality is very slow. Extracted usually sells very slowly in our market; as yet, no extracted has been received.

BEESWAX—None in Market.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—We quote our market at 18@20c. for 1 lb. white clover; 18@19c. for 2 lb. white clover. Extracted is in good supply, and selling from 9@10c.

BEESWAX—Our supply is gone; we have none to quote.

BLAKE & RIPLEY, 57 Chatham Street.

☞ May we ask you, dear reader, to speak a good word for the BEE JOURNAL to neighbors who keep bees, and send on *at least one new* subscription with your own? Our premium, "Bees and Honey," in cloth, for one *new* subscriber to the Weekly, or two for the Monthly, besides your own subscription to either edition, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1 year, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with $6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For four subscribers, with $8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with $10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

Books at Fairs.—Those who make an exhibit at Fairs will find that an assortment of Books and Pamphlets would sell and leave them a profit for handling. We will send such, postage prepaid, at 25 per cent. discount; or if the purchaser pays express charges, we will supply any of our own publications at 40 per cent. discount.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

☞ The new two cent rate of postage for letters goes into effect on October 1. Three cent postage stamps will then be but little used. For all fractions of a dollar sent to us hereafter we should prefer either *one-cent*, or else five or ten-cent postage stamps. Do not send coins in any letter.

Fairs.—To any one exhibiting at Fairs, we will send samples of the BEE JOURNAL and a colored Poster, to aid in getting up a club. The Premiums we offer will pay them for so doing. For a club of 8 subscribers to the Monthly BEE JOURNAL, or 4 Weekly, we will present Dzierzon's Rational Bee-Keeping, price $2.00.

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN.

Editor of the Weekly Bee Journal.

925 West Madison Street, Chicago, Ill.

It contains 160 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey Bee, and at the same time produce the most honey in its best and most attractive condition.

Appreciative Notices.

A neat and abundantly illustrated hand-book of apiculture.—American Agriculturist, N. Y.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Tenn.

Contains all the information needed to make bee-culture successful.—Eagle, Union City, Ind.

Just such a work as should be in the hands of every beginner with bees.—News, Keithsburg, Ill.

Valuable for all who are interested in the care and management of bees.—Dem., Allegan, Mich.

Engravings are fine. Gotten up in the best style, and is cheap at the price.—Farmer, Cleveland, O.

Carefully prepared for beginners.—Farmers' Cabinet, Amherst, N. H.

A very valuable work to those engaged in bee-raising.—News, Prairie City, Iowa.

We advise all who keep bees to send for this excellent work.—Journal, Louisiana, Mo.

Carefully prepared, and of vast importance to bee-raisers.—Indianian, Clinton, Ind.

New and valuable, and embellished with 109 beautiful engravings.—Democrat, Salem, Ind.

Much practical useful information, in a cheap form.—Daily Standard, New Bedford, Mass.

The most perfect work for the price ever yet produced on the subject of bee-culture.—Anti-Monopolist, Lebanon, Mo.

A manual, containing all the newest discoveries in the management of these little workers.—Plain Dealer, St. Lawrence, N. Y.

Full of practical instruction, that no one who contemplates keeping bees can do without.—Farmers' Journal, Louisville, Ky.

It comprises all that is necessary for successful bee-culture, save experience and good judgment.—Daily Republican, Utica, N. Y.

Gives minute details for the management and manipulations necessary to make bee-keeping a success.—Col. Valley and Farm.

Written in an interesting and attractive manner, and contains valuable information for all readers, even though they be not directly interested in the care of bees.—Sentinel, Rome, N. Y.

It embraces every subject that can interest the beginner in bee-culture. The engravings perfectly illustrate the text.—Farm and Fireside, Springfield, O.

Embraces every subject of interest in the apiary, giving very thorough details of the management and manipulations necessary to make bee-keeping a success.—Farm. Longmont, Colo.

It is a valuable and practical book, and contains a complete resume of the natural history of the little busy bee, as well as of all that one needs to know in their care and management.—Chicago Herald.

Contains a vast fund of information in regard to bee-culture. He who would keep abreast of the times must keep posted in all the improvements in his line. We advise all interested to get a copy of this book.—Daily Times, San Bernardino, Cal.

Describes all the newest discoveries in the art, by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive shape.—Signal, Napoleon, O.

It embraces every subject that will interest the beginner. It describes all the newest discoveries in the art by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive form. It is embellished with beautiful engravings, and is the most perfect work of the kind, for the price, that has ever come under our notice.—Farmer, Lancaster, Pa.

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THOMAS G. NEWMAN,
925 W. Madison St., Chicago, Ill.

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EDITOR AND PROPRIETOR.

The North American Bee-Keepers' Association.

The representative of the BEE JOURNAL, Mr. W. F. Clarke, furnishes the following report of the proceedings of the Convention:

The Association met in the City Hall, Toronto, Ont., on Tuesday, Sept. 18, at 10 a. m., the President, D. A. Jones, in the chair.

There was a large attendance for the initial meeting, but as the Secretary, Mr. A. I. Root, had not yet arrived, routine business was deferred, and reports were invited from various parts of the Continent, which were listened to with much interest. [These Reports, together with the address of the President and some other papers and discussions in detail, will be given in our next issue.—ED.]

This meeting of the Association had some peculiar features:

1. It was held for the first time in the history of the Association on Canadian soil. From the outset this body has been international and continental, and comprised both countries. Canadian bee-keepers have been delighted to have this meeting on their side of the lines, and the feeling manifested all round was very cordial. The term "brother" was so uniformly employed, that one might easily have imagined that the gathering was an Ecclesiastical rather than an apicultural one, but for the topics discussed.

2. The almost total absence of papers specially prepared for the convention. In the past there have probably been too many papers; this time there were too few. A little more heavy ballast would probably have steadied the ship, which sometimes appeared in danger of keeling over with exuberance. The discussions were occasionally rather superficial for want of being opened by a thorough treatment of important topics. Most of the "vexed questions" among bee-keepers got the go-by, and the meeting had more the character of a happy reunion, than of a debating society. Many points of interest to advanced bee-keepers failed to come up, and scarcely any strong diversities of opinion presented themselves. Two or three papers from men who have strong convictions on certain topics, would have at least made more variety.

3. There was no committee on business, or indeed on anything. How the convention was run, or whether it ran alone, deponent sayeth not. A prominent member asked on the third day, "who is running this thing?" but though he spoke out loud in meeting, there was no reply. It will probably remain an unexplored and unexplained mystery to most of the members, how the machine was guided. To all appearance, it went like a balloon, and was influenced by unseen, aerial currents, but at any rate, if it were so, the aeronauts had a very pleasant voyage, and got down to solid ground safely. All present were unanimous in declaring that they had "a good time."

4. Last, but not least, there was the presence of the Nestor of modern bee-keeping, Rev. L. L. Langstroth, the state of whose health has not admitted of his attendance at such a meeting since 1870. His friends all over the Continent of North America, and elsewhere, will be glad to learn that he declares himself to be better in health than he has been for twenty years. He spoke with great force and effect, several times proving himself, "the old man eloquent." His presence added a great charm to the meeting, as well it might, and did much to give it that character of a happy reunion to which allusion has already been made.

AFTERNOON SESSION.

A large number convened in the afternoon, when it was thought advisable to discuss miscellaneous questions, pending the arrival of the Secretary, and other expected members of the Association. The first asked was the most desirable thickness of comb foundation for section boxes. Prof. Cook, Dr. Miller, Messrs. Vandervoort, Taylor, Jones, and several others gave their views, which were pretty unanimous as to about 7 square feet per pound being the most desirable size. "What is the cause of fertile workers being developed?" was next discussed, and some difference of opinion made it lively. Prof. Cook thought the desire for eggs in the absence of a queen, stimulated the laying propensity in the workers. Dr. Brown was of the opinion that food had much to do with the matter, and read a brief paper giving his observations concerning fertile workers for two or three years past, confirmatory of that opinion.

President Jones said, he had seen abundant proof in his apiary, that feeding had nothing whatever to do with developing the laying instinct in workers. After a free interchange of opinions, the subject was dropped, whereupon the question of bee forage was introduced. This created much interest, many of the members present giving their observation and experience in relation to honey-producing plants. The general feeling seemed to be that this matter was one of great practical importance, to which bee-keepers must give more attention hereafter. The next question propounded was, "What precautions are necessary to prevent young queens mistaking their hives on returning from their bridal tour?" Dr. Andrews would set his hives at varying angles. President Jones thought no precautions were necessary provided the hives were not too close to each other. They should be fully 6 feet apart. One member suggested the use of a narrow board in front of hives, from which young queens might issue. "What is the most desirable width for section boxes?" was the next question. Mr. Pettit said, the best comb honey at the Toronto Exhibition was in sections about an inch and a half in width.

The President and a number of the members of the Northeastern Bee-Keepers having entered the meeting, they were introduced by the President, and asked to participate freely in the discussions. The subject of sections was then resumed, and took a wide latitude, including the question of separators, the comparative advantage of half-pound and one-pound sections, and the demands of the market. Mr. Muth went strongly against the half-pound sections, which he thought were ridiculously small. Speaking as a dealer, there was no demand for any thing so small. Prof. Cook rather mildly defended the half-pound section, and referred to Mr. Heddon's experience with it, and especially to his doing without separators. Dr. Miller had been experimenting with the half-pound sections without separators, but had been troubled with irregularity of building to an extent that interfered with packing. Mr. Pringle thought it advisable to have sections of different sizes to meet the varied demands of the market. Several others took part in the discussion, and the weight of opinion was evidently on the side of one and two-pound sections.

At this stage of the meeting, Mr. A. I. Root arrived, and a resolution was adopted arranging for a visit to the Exhibition early to-morrow morning, when the meeting adjourned until 7:30 p. m., to give opportunity for the enrollment of members and payment of annual subscriptions.

EVENING SESSION.

The Association resumed business about 8 p. m., with a greatly increased attendance. Prof. Cook, at the request of President Jones, exhibited and explained the use of a brush devised by T. J. Cook, of New Point, Ind., for brushing bees off combs. The Professor prefaced his remarks by stating that the inventor of this brush was no relation of his, and that he had no interest in the matter, except to call the attention of bee-keepers to what was a much better device than a goose feather, bunch of grass, or asparagus, for brushing off bees. Three samples had been sent to the Convention, and were on the table for inspection. Having used the brush with much satisfaction, he was pleased to recommend it to other bee-keepers. Dr. Miller and Mr. Corneil joined in the recommendation.

The discussion of questions was then resumed by considering the best method of getting the bees out of section boxes, at the close of the honey season. Dr. Miller's plan was to raise the section case a little, lay a cloth between it and the hive, leaving one corner open so that the bees can go down into the body of the hive during the night, which they will do if the cover is left off the hive. Then remove the section case in the early morning. Mr. Bacon practiced taking the sections into a room and leaving the window open, so that the bees could return to their hive.

The subject of curing or evaporating extracted honey was next taken up. Mr. Poppleton, on being called upon said, he lived in a dry climate where no particular means were needed, but farther South precautions must be taken or honey would become sour. He was of opinion that the sun was the best evaporating agent, when it was necessary to do any thing with that object in view. Mr. Corneil was of opinion that the first point to settle was whether the honey needed evaporation. If it did, he, too, was of the opinion that the sun was the best agent for doing it. Mr. A. I. Root gave a very full account of his experience with different qualities and varying thickness of honey. Mr. McKnight confirmed Mr. Root's testimony, and said that a lot of honey stored in a tank had become so watery on top that some of his family suspected that honey had been stolen, and water added. He knew better, as some of the honey had been gathered in a rainy time. A number of testimonies were given, all going to show the impolicy of putting unripe honey on the market. This topic branched out into a discussion of candied honey, the best means of re-liquefying it, and a variety of other details. A question was now raised which excited a lively expression of opinion, and illustrated the maxim that "doctors differ." It was, "If I have 100 colonies, spring count, and wish to increase to 150, shall I do best to make the increase before the honey harvest, during the honey harvest, or at the close of the honey harvest?"

Prof. Cook replied, "Before, if possible; if not, afterwards; during, never." Dr. Miller said, "During, always," and there was a running fire of opinions *pro* and *con*, which, at last, settled down to a good discussion on the point. Mr. Poppleton apparently carrying the day by contending that increase should be carried on from early spring, right along, and be completed by the end of the honey harvest. The subject of tiering up sections was next discussed, whether it should be done under or on top. Strange to say, both methods had its advocates. Mr. Hall, the largest producer of comb honey in Ontario, puts the empty sections on top. Dr. Miller had come to the same view. At this juncture, Mr. Heddon was greatly needed, but was not forthcoming.

The comparative advantage of one and two story hives for extracting honey was then brought up by a question. In the course of the discussion, speakers branched out into a general statement of experience with hives, and a mixing up of extracted and comb productions in a somewhat confusing manner. The question which is the best material for spreading in front of bee hives led to a variety of opinions. Some one said, "Mr. Root recommends sawdust." Mr. R. replied, "I once did, but I do not now. I find the best material to be a foundation of cinder, and a thin coating of the whitest sand on top." President Jones recommended leached ashes. A member said it created too rank a growth of grass and weeds. Another member suggested salt.

At this stage, Dr. Miller offered a resolution that the editors of bee periodicals be requested to encourage correspondents to append to their signatures a statement of the number of colonies owned by them in the spring, and the number owned at the time of wintering. The resolution was hurriedly put and declared carried without opportunity of discussion.

The President then informed the meeting that Rev. L. L. Langstroth had arrived, was at the Queen's Hotel, and would join the party to-morrow morning for the Exhibition grounds. The meeting then adjourned.

SECOND DAY.

Pursuant to resolution adopted yesterday, the members of the Association took steamer for the Exhibition grounds, about three miles from the city, to see, first of all, the Honey Show, and then any other objects of interest which had special attractions for them. It may be observed that a great Industrial Exhibition lasting two weeks is now in progress, and the Honey Show is one of its Departments.

It is held in a building about 40x120, which is entirely devoted to this purpose, and is filled from end to end with the finest display of honey ever collected on this Continent. A little detail will give some idea of the scene. D. A. Jones, of Beeton, has, of course, the largest exhibit. At one end of the building, he has a pyramid of cans, ranging from two ounces to five pounds in capacity, the whole forming a little mountain of honey, 41 feet 6 inches in length by 14 feet in breadth, and towering far above the heads of visitors. In the centre of the building a cone of smaller circumference, but rising to a greater height, is similarly constructed. Above this pyramid floats a variety of flags, and above all the porcelain globe of a powerful electric light spreads at night the brightness of noonday over the whole interior of the building. Great boxes of honey are piled against the wall, and over them, and on the floor are 80 barrels in all of the luscious liquid.

In all, Mr. Jones has about 50,000 pounds of honey in the building. Mr. Hall of Woodstock, Ont., is the next largest exhibitor, and shows an imposing array of white combs rising far upwards, and varied every 2 feet by buttresses of extracted honey in gaily labelled cans, extending far along one side of the building. Mr. Hall has on display about 9,000 pounds of honey in the comb, and about 13,000 extracted. Martin Emizh, of Holbrook, Oxford county, takes the palm for the nicest exhibit of comb honey. It is remarkably uniform and well filled out in the comb. Much admiration was expressed of this exhibit, which comprised about 4,000 pounds. Mr. Ramer, of Cedar Grove, Mr. Goodyear, of Woodstock, G. B. Jones, of Brantford, W. C. Wells, of Philipstown, Ont., Messrs. Granger & Duke, of Deer Park, and others contribute to make up the fine display, which here presents itself to the eyes of the visitors.

To many, a far more interesting and attractive object than the honey show, was presented in the person of the Rev. L. L. Langstroth, who held a sort of extempore levee in the building, and went through a somewhat fatiguing ordeal in the way of shaking hands with the multitude of bee keepers and others who were introduced to him by President Jones and Wm. F. Clarke. It became necessary after awhile to withdraw the venerable apiarist from the scene that he might rest somewhat, and be in tune for the public meeting. Meantime, a general reunion of bee-keepers went on in and around the extensive exhibition building. Few seemed to feel much interest in the other departments to be found on the grounds, and there was ample proof of the correctness of a remark made by Mr. Langstroth, that of all classes he had met with none were so enthusiastic in the line of their calling as bee-keepers.

The convention was broken up into a multitude of little conventions, and all seemed to enjoy the opportunity of social intercourse presented. Attention was not confined to the interior of the building, but extended to a survey of the bee hives, colonies of different races of bees, and the large variety of bee requisites to be found adjacent out-of-doors. To attempt a specification of all the numerous articles on exhibition would extend this report to a length that would be unsuitable, and should anything be undesignedly omitted, the inventor or owner would feel himself slighted.

AFTERNOON SESSION.

The Association resumed in the City Hall. Miscellaneous questions were the first order of business.

Dr. Thom asked if any one had experienced evil effects to the eye-sight from the use bee-veils. This led to a general discussion on the best material for bee-veils; several declaring in favor of black, and some in favor of white gauze. A few spoke in approval of wire netting, while others urged objections against it. A. I. Root said he had experimented, and used many endeavors to obtain a wire cloth that would have all the advantages of wire cloth, without any of its disadvantages, but had not succeeded. On the whole, he would recommend bee-keepers not to use veils unless obliged to do so. Mr. Corneil did not think veils did any particular injury to the eye-sight, otherwise ladies would not wear them so extensively. President Jones recommended the use of the finest Brussels lace. Mr. Bowers thought the veil might be made of any cheap suitable material, with a window of the very best silk bobbinet.

Mr. C. W. Young brought up the subject of collecting statistics. He suggested that the local press should be more generally utilized for the purpose of conveying information about apiculture. A general discussion on the importance and yet diffilty of obtaining statistics ensued. President Clarke, of the Northeastern Association, said they had found it impossible to get statistics even from prominent men, in any year, when they happened to be unsuccessful. For that reason the Northeastern Association had discontinued the publication of its reports.

The question of the proper width of sections was then resumed, and talked over at some length, but nothing particularly new was elicited.

At this juncture, Rev. L. L. Langstroth entered the convention, was received with a rising expression of welcome by the members, and conducted by the President to the Mayor's chair, as a token of respect, amid loud and prolonged cheers.

The President's address was then delivered. It consisted mainly of welcoming words in regard to the meeting of the Association, together with a brief resume of the honey season just past. Prof. Cook, Messrs. Bacon, A. I. Root, Pierce, and Dr. Miller made responses, gratefully appreciating the welcome which had been accorded to the Americans, and the pleasure it had given them to visit Toronto, and attend this convention. By special request of President Jones, Mr. Langstroth addressed the meeting. He gave an interesting account of the way he was led into bee-keeping, and of his early mistakes and difficulties; related the manner in which he had been led to invent the movable frame, and the circumstances connected with its general adoption; and stated a number of interesting facts bearing on the history and progress of bee-keeping. At the close of Mr. Langstroth's address, the Association proceeded to elect officers.

On motion of Prof. Cook, Rev. L. L. Langstroth was chosen President. The motion was carried by a standing vote. L. C. Root, of New York, was appointed First Vice-President; Dr. C. C. Miller, of Illinois, Secretary, and C. F. Muth, of Ohio, was re-appointed Treasurer. A list of Vice-Presidents for the several States and Provinces was also made up.

The question of the next place of meeting was then taken up. President Clarke, of the Northeastern Bee-Keepers' Association, on behalf of New York, invited the members to Rochester next year. Dr. Miller conveyed the request of the Northwestern Bee-Keepers' Association to appoint the next annual meeting at Chicago. On motion of Prof. Cook, Rochester was chosen as the next place of meeting. The date was left to be fixed by the executive committee.

EVENING SESSION.

Business resumed, Vice-President Cook in the Chair. The discussion of miscellaneous questions was made the first order of the evening. Two enquiries concerning foul brood were laid on the table.

"Is it advisable to clip the wings of queen bees?" was next asked. A lively discussion arose, proving the house to be considerably divided on the point. One member announced himself "a clipper." Another said he might be a clip, but he was not a clipper. The reasons for and against were pretty fully stated.

"At what age should a queen be superseded?" was the next question. Mr. Hall thought no age could be fixed. Bees were like human beings, some were young when they were old, and others were old when they were young. Queens should be watched, and superseded when not working satisfactorily. Mr. Langstroth would not fix any unvarying time, but he had found two seasons, on an average, the term of a queen's greatest prolificacy. After that, they would show signs of failure. It was a remarkable feature in the Italians, that they were quick to notice signs of failure in a queen, and took early measures to supersede her. That alone was sufficient to recommend them.

The best method of feeding in the fall was next considered. Mr. Jones, on being called up, advised the use of the best granulated sugar, in the proportion of two pounds of sugar to one of water. The discussion soon branched off so as to take in the topic of feeders. Mr. Langstroth and others discouraged the use of fancy feeders. Mr. Jones tilts the front of the hive a little, and pours the syrup on to the bottom board, from which the bees take it up very quickly. Mr. Locke suggested that all bee-keepers could not tilt their hives, and hence, some kind of a feeder became necessary. He recommended the use of a Mason fruit jar furnished with a tin cover perforated with a number of holes. Filled with syrup and inverted, this made a good feeder.

The treatment of wax then occupied the attention of the meeting. Boiled down, the discussion amounted to this: that great pains ought to be taken to purify wax; that to secure this it was necessary to keep wax in a melted condition for several hours, long enough indeed to allow all sediment to settle to the bottom. A. I. Root said he had worked up 12 or 14 tons of wax this season, and pursued substantially this plan. He made three qualities of foundation. Wax from the top of the tanks was used for section foundation, being the whitest; the second and third qualities being darker, were sold at less price for brood comb foundation.

At the instance of Prof. Cook, it was decided that the rest of the evening be given to Rev. L. L. Langstroth for a talk on old bee books. This was very interesting. Beginning with Aristotle, Virgil, Columella, and Pliny, on each of whose knowledge of bees remarks were made. The speaker came down to books that appeared in the days of the Stuarts and the Commonwealth, the former entitled "The Monarchy of Bees," and the latter, "The Reformed Commonwealth of Bees;" indicating the different political circumstances of the times in which they were written. Some extracts were given from these books, and Mr. Langstroth expressed the hope that he might yet be able to publish a work embodying these and other observations on old bee books, which would show modern bee-keepers that ancient apiarists knew a great deal more about bees than they usually got credit for. Even the advanced bee-keepers of to-day might learn much from them.

At adjournment, it was decided that the convention should close with to-morrow afternoon's session.

THIRD DAY.

The Association met at 9 A. M., Vice-President Cook in the chair. About 100 members were present at the opening of the morning session. Discussion of questions was resumed, the first being, "What is the best way of preserving surplus combs from the ravages of the moth ?"

Judge Andrews thought there was no time when there were not eggs of the bee-moth in comb. Heat would develop them. The combs should be carefully kept in some cool place.

Dr. Brown found it necessary in the warm climate of Georgia, to have a comb repository, which he kept fumigated with sulphur.

Mr. Jones places his frames about an inch or an inch and a half apart, and if allowed to hang all winter, exposed to frost, there will be no trouble from the moth. He recommended that the joists of the honey-house overhead, be set just the right width to hang the frames on rabbits, tacked to the lower edge of the joists.

Prof. Cook summed up that the moth would never trouble combs while sufficiently covered with bees; not so protected, the moth will certainly be developed; hence strong colonies were the best antidote to this insect. Comb should not be left lying loose around the apiary, but should be stored out of reach of the moth miller, and kept in a cool place.

The right temperature at which to winter bees was the next question considered.

Prof. Cook would say from 40 to 45 degrees.

Dr. Miller called attention to the varying markings of thermometers, which rendered it undesirable to fix very exactly the degree of temperature to be maintained. He would advise watching the bees, and keeping them in that temperature in which they preserved perfect quietude.

Mr. Jones used to think 40° was about the right temperature, afterwards he thought it should be 43° to 45°; but he had come to the conclusion that it was better the temperature should go higher than 45° than under 40°, especially during the latter part of the winter. He had frequently had his houses go above 50°; in one case, accidentally, a house went up as high as 70° without any ill effects. More harm comes of letting the temperature go too low, than too high.

The general subject of wintering bees was then taken up.

A. I. Root was not going into the subject at length, but wished to mention a case in which the bees had been given access to water by means of a sponge, with good results.

Prof. Cook had followed that example of giving the bees a drink, but every colony so treated had turned out unsatisfactorily.

Mr. Jones did not believe in keeping hotel in a bee-house. He had never had any trouble with his bees being too dry. Excess of moisture had often troubled him. While speaking of wintering, he would strongly recommend the use of a bee-house with hollow walls, of a foot or more in thickness, filled in with sawdust or some similar material. If you have 100 colonies, and were sure they would winter safely out-doors, you may calculate that it will cost $1.00 per colony, or $100 more to winter out-doors than in-doors; it therefore pays to have a house. Instead of packing hives, he would pack the house the hives are stored in.

A running fire of questions was here opened on Mr. Jones in regard to various particulars relative to his method of wintering. The discussion gradually drifted off into the subject of ventilation, on which a great variety of opinions was expressed.

Dr. Miller frankly confessed that even yet he knew nothing definite about wintering. Circumstances and conditions differ so greatly, that what succeeds one season, fails another.

A member spoke of the unsatisfactory use of enamelled cloth in winter.

A. I. Root said it was a mistake to suppose that the cloth was to be used in all seasons. In winter he used burlap, a coarse species of bagging, which the bees could look through if they wanted to. He also used woven slats. He thought either of these with a packing of forest leaves on top, such as Mr. Dadant uses, make a good winter covering.

Mr. McKnight had tried various packing materials, but found nothing so good as the ground cork, in which grapes are packed when shipped from France. He found no difficulty in getting all he wanted from the grocers in his town.

A number of members gave their views of packing for winter, and various materials were suggested for the purpose.

At this juncture, A. R. Boswell Esq., Mayor of Toronto, entered the meeting, and was received with warm cheering. A vote of thanks was then enthusiastically passed, expressing the gratitude of the Association to the Mayor and City Council for the use of the City Hall free of cost for these meetings.

The Mayor replied, cordially welcoming the Association to Toronto, especially those members who have come across the border. He referred to the grand honey display, and the rapid progress bee-keeping was making, and wished the Association the greatest prosperity.

On motion of D. A. Jones, seconded by Dr. C. C. Miller, it was Resolved unanimously, That in the opinion of this meeting, the time has fully come for a recognition of the claims of bee-culture by its being taught in all the agricultural colleges throughout the continent of North America.

In connection with this resolution, a paper was, at the call of the meeting, read by Wm. F. Clarke. It was the only paper specially prepared for the Convention, yet presented.

An interesting episode then took place in the form of an address, from the Ontario Bee-Keepers' Association, to Rev. L. L. Langstroth, accompanied with a purse containing $56 as a trifling token of esteem.

Mr. Langstroth replied in a feeling manner, and referred at some length to the manner in which his motives had been misunderstood many times, and to his earnest wish to promote by all honest means, the interests of apiculture.

Vice-President Cook expressed the great pleasure it had given him to attend this Convention, and to witness the harmony and good feeling which had prevailed. He was especially gratified at the presence of Mr. Langstroth, and the manifestations of grateful respect to him on all hands. In view of the many auspicious circumstances which had characterized this meeting, he proposed that all should join in singing the Doxology. This was done very heartily, after which Rev. L. L. Langstroth pronounced the Benediction.

As a number of the members were about leaving, there was much cordial hand-shaking at the close of this session.

AFTERNOON SESSION.

The Association resumed at 2 P. M., Dr. Miller in the chair. There was still a large attendance, though a number had left for home.

The first subject taken up was that of frames.

Mr. Hart complained that many of the frames he had obtained from the North were too slender, sagged too much, and sometimes broke.

Dr. Miller expressed surprise at this, and said he had experienced no such trouble.

Mr. Langstroth described a frame with triangular corner supports for the top-bar. He thought this could be made stronger than any other.

Mr. Muth said he preferred the frame he now used, which had a heavy top-bar, the whole underside of which was beveled.

Some other members expressed their views on the frame question, but all agreed that it was desirable to have sufficient strength in the top-bar to stiffen the whole.

The question, what were the best barrels for shipping honey ? was discussed.

Mr. Muth said a great deal of honey was lost by being put into improper barrels. They were often too weak and slender. Second-hand barrels were often used, and there was constant loss when this was done. Honey was heavy, and needed a strong package; he preferred cypress. Oak made good barrels when well coopered, but badly made, they were the worst of all for leaking.

Mr. Jones agreed with Mr. Muth, but thought white-ash preferable to oak. He had been greatly troubled to get thoroughly-tight barrels.

Mr. Poppleton had found some second-hand barrels answer very well.

A resolution was introduced by Mr. Pettit, seconded by Mr. Muth, pledging the Association to do all in its power to remove the public prejudice against granulated honey. Considerable discussion arose on this resolution, which, at first, merely expressed the idea that granulated honey was "natural and good." Some wished to affirm that pure honey would always granulate. Others objected that it would not always granulate. Mr. Jones challenged any one to produce pure honey that would not granulate. Mr. Muth had kept California honey a long time, even three or four years before it granulated, but it did so at length. He had seen honey mixed with glucose that granulated to a certain extent. Mr. Jones said the pure honey would granulate, and the glucose float on top. He admitted that there was a difference in the grain; some was coarse, and some fine. After much tinkering at the resolution, it was finally adopted in the following form:

Resolved, That we as individuals and as an association do all in our power by precept and by practice to convince the public that granulated honey is natural, wholesome and desirable, and that granulation is a fine test of its purity.

Mr. Jones was requested to give an account of his method of introducing queens by the use of chloroform, which he did, and then a general discussion of queen introducing sprung up. Mr. Langstroth narrated in an interesting manner some of his early experiments in queen introduction. Among others, he tried the experiment of making a whisky syrup which he fed to the bees and the queen. They acted very much as drunken people do, but when sober, would not accept the queen.

Mr. Jones stated that the reception of a queen depends on her own behavior. If she is frightened, nervous, and uneasy, the bees will ball and dispatch her, but if she is quiet and contented, there is no trouble. The main thing, therefore, is to devise a plan by which the queen will be led to act in a natural manner. Mr. Langstroth and Judge Andrews confirmed this view.

After some further talk on the subject of queens, Dr. Brown remarked, that one and another seemed to be dropping out of the meeting, and it was desirable that there should be a general hand-shaking all round. He therefore moved, seconded by C. F. Muth, that the Association do now adjourn, to meet in Rochester, N. Y., a year hence. The motion was carried, and the convention declared adjourned, *sine die*.

☞ The bee-keeper who expects to keep up with the times, must make up his mind to push things, and not allow himself to be drawn along by circumstances. In order to push, one must think and plan ahead of the work to come, and have all things in readiness, so that there may be no delay in doing the work at the right time.—*Indiana Farmer.*

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey* at Fairs, will sell almost a fabulous quantity of it.

Bee and Honey Show at Toronto.

From the Toronto *Globe* we extract the following article concerning the Bee and Honey Show and Convention:

Among the varied attractions of the Toronto Exhibition the present year, prominence may very properly be given to the annual meeting of the above named society, which is to be held in the City Hall and Council Chamber on the 18th, 19th and 20th instants. As this is the first time this important organization has met on Canadian soil, the occasion was one of special interest to the bee-keepers of this country, and it is well that they should be made familiar with the origin, history, work, and aims of the society in question. It was formed at Indianapolis, Ind., December 21, 1870. As its name imports, it is international and continental in character. It was originally designed to be a national society, but Canada was represented at the initial meeting in the person of Rev. W. F. Clarke, of Guelph, who was and is, not only a prominent agriculturist, but an enthusiastic bee-keeper. At that gentleman's suggestion and request, the society was expanded in scope, so as to take in the Dominion along with the Republic. Though this is the first time the society has met in Canada, this country has had its fair share of honorable recognition by it. During the thirteen years of its existence, Canada has been thrice represented in its presidency, twice by Mr. W. F. Clarke, and once by Mr. D. A. Jones, who now worthily fills the office, and to whose influence the selection of Toronto as the place of meeting for 1883, is to be mainly attributed.

The first president of this society was the Rev. L. L. Langstroth, who may, without invidiousness, be styled the father of modern bee-keeping. His book on the "Honey Bee," and his invention of the movable frame hive, may be said to have revolutionized bee-keeping. Prior to these being presented to the public, bees were kept in a hap-hazard way. But little was known of the nature and habits of this little insect beyond the facts embodied in the well-known juvenile hymn, beginning,

"How doth the little busy bee."

The interior economy of that wonderful miniature world—a bee hive—was well nigh unknown. Everything inside the hive was "fixed fast in fate," and inaccessible to any but its honey-gathering population. The movable frame was indeed a revolution in bee-keeping. It enabled the apiarist to control the operations of the industrious little workers, and paved the way for the extractor, queen-breeding, and various other improvements, which have combined to make bee-keeping, as now carried on, one of the wonders of the age we live in. Mr. Langstroth still lives to witness the marvelous progress of the pursuit for which he has done so much; and though in poor health, and bending under the weight of years, intends being present at the approaching meeting. There are few who are aware of the great services this remarkable man has rendered to apiculture, who will not feel that the opportunity of seeing and hearing the Nestor of modern bee-keeping, will be of itself sufficient inducement to secure their attendance and ample reward for it.

Mr. Langstroth was fitly succeeded in the Presidency of the Society by the late Moses Quinby, whose work on the "Mysteries of Bee-Keeping" ably seconded the teachings of its predecessor, and whose labors in the advancement of this industry were hardly second to those of Mr. Langstroth. Mr. Langstroth was only able to spare moments of leisure from the duties of a higher calling. These he faithfully devoted to the advancement of his favorite secular pursuit, and few men can point to such a record as his, resulting from masterly and diligent use of leisure. But Mr. Quinby devoted his whole time and attention to bee-keeping, and was one of the first, if not the very first, to exalt this pursuit into a business. Encouraged by his example, and guided by his teachings, others concentrated their energies on this industry until it became as much a distinct and special avocation as any other. Both Mr. Langstroth and Mr. Quinby labored for the advancement of apiculture with a most unselfish zeal, and while others were incessantly plying the public with patented fixtures, generously gave the fruits of their thought and toil to the world at large. They might both have become rich had they secured to themselves, as they might have justly done, royalties on their discoveries and inventions, but they toiled in self-forgetfulness, and apiculture owes them a debt of gratitude which, it is safe to say, never can be repaid.

It would be too long a detail to enumerate what the North American Bee-Keepers' Society has done toward the advancement of the industry for whose development it has worked. But this much must in all justice be said for it: that it has brought together the leading bee keepers of the Continent in yearly conclave, and their comparison of notes has been of incalculable advantage to themselves and to the apicultural public in general. Among other benefits that have resulted from this, the field of apiculture has been cleared of a vast number of impositions and shams, and bee-keeping has been exalted to a compacted science and an established industry.

The American Bee Journal, published at Chicago, Ill., is, without question, the leading apicultural journal of the world. Its existence to-day is due to the North American Bee-Keepers' Society, established in 1861, by Samuel Wagner, a name of high renown in the annals of American apiculture. It was on the lamented death of that gentleman, in February, 1872, in eminent danger of extinction. At the next annual meeting of the Society, the future of this important periodical was an anxious topic of discussion. The then President of the Society, Rev. W. F. Clarke was urged to take the enterprise in hand, and encouraged by the pledged co-operation of leading members of the Society, did so. The JOURNAL was removed from Washington, D. C., its former place of publication, to Chicago, and the foundation laid of its subsequent prosperity. Mr. Clarke gave it his personal supervision for a year, when it passed into the hands of Mr. Thomas G. Newman, who has guided its destinies ever since, and under whose able management it has become the most potent literary agency for the promotion of bee-keeping at present in existence. If the Society had accomplished nothing more for apiculture than the preservation of this invaluable periodical, it would deserve to live and prosper.

The great lights of North American bee-keeping are expected at the approaching annual meeting. It is conceded that this Continent now leads the world in apicultural progress. The apiarists of all other countries dip their flags to North America, and Canada enjoys the proud boast of having produced the foremost of enterprising and successful bee-keepers in the person of Mr. D. A. Jones.

Among other distinguished apiculturists who intend to be present on the approaching occasion, special mention may very properly be made of Prof. A. J. Cook, whose "Manual of the Apiary" is now generally accepted as the standard work on bee-keeping. Mr. Cook is an accomplished entomologist, of which science he is professor in the Michigan Agricultural College, and in the course of his teaching makes a specialty of scientific and practical bee-keeping. He manages an experimental apiary at the college, and in this branch of study has a class of 40 students the present year. Did space permit other high authorities in bee-keeping might be named, whose presence will give interest and importance to the meeting about to be held.

It is to be hoped that all Canadian bee-keepers who can possibly attend the expected apicultural parliament will make a point of being there. Such a gathering cannot fail to give a great impetus to a large and rapidly growing rural industry. As a business bee-keeping is only in its infancy. There are vast possibilities about it yet to be developed. Without exaggeration or figure of speech—"there are millions in it." Our own Mr. Jones and other Canadian bee-keepers have shown us what can be done in this line of things. Bee-keeping offers an inviting field as a business, and as an adjunct to general farming is well worthy of receiving far wider attention. When it is considered that the income of every farm throughout the country might easily be augmented at least a hundred dollars a year, by keeping a few hives of bees, it will at once be seen what an immense increase of national wealth might be obtained were the flowers that now "waste their sweetness" duly utilized by a force of honey-gatherers large enough to collect the revenue they are so willing to yield, when swift-winged foragers "present their little bills" for liquidation.

Bonner, the Scottish Bee-Master.

Mr. Wm. Raitt, of Blairgowrie, Scotland, gives the following in the London *Journal of Horticulture*, concerning his fellow countryman, the noted Caledonian bee-master:

Bonner's name is so much more widely known than his works on bee-keeping, that I doubt not many readers of our Journal will be glad of a few notes culled from his rare book.

Bonner was the twelfth child of a handloom weaver, of Coldingham, in Berwickshire, and seems to have received a fair education. He followed his father's occupation, and became the author of a work called "Practical Warping Made Easy." His father was an enthusiastic bee-keeper, owning as many as a dozen colonies at a time, and in good seasons made as much money by his bees, as nearly purchased oatmeal sufficient to serve his numerous family for a whole year. He purchased with a single season's wax a large quarto Bible (an expensive article in those days), "which served as a family book ever after," and his home was always supplied with honey and mead. The old man worked at his loom till within a few days of his death, in the 86th year of his age.

James, our author, was thus a born bee-master, and so great was his interest in bees that he, about the year 1765, travelled all the way to London to get a chance of conversing with the famous Wildman. The latter happened at the time to be in France, so Bonner had to return without seeing him, but he solaced himself by the possession of a rich haul of bee books, picked up on London bookstalls. He tells us he bought every book on bees that he could find. After this, and under the impulse of fresh discoveries day by day, he became so absorbed in his studies and experiments, that during the honey season he hardly took any sleep for whole weeks together. At last, in 1789, he published his first book, a "Treatise on the Management of Bees," which was well received. In succeeding years he made so many discoveries and improvements, that he resolved to embody all he knew in the larger work by which he is better known, "A New Plan for Speedily Increasing the Number of Hives in Scotland," etc. This work was issued by subscription in 1795, and was directly under the patronage of the "lords and gentlemen" of the Highland Society, the then representative of the great Agricultural Society of the present day, at whose shows the bee tent is a regular attraction.

As affording a fair contrast between the best principles of bee-keeping in the last century and those of the present day, I note a few of the more prominent of Bonner's ideas:

Honeydew.—He speaks of it as an exudation of the saccharine juices of plants, which, in some cases it undoubtedly is, but he seems to have no idea that the bulk of it is the excretion of aphides.

Crude and Perfect Honey.—He decidedly differs from Mr. Pettigrew in this matter, having satisfied himself that the nectar as gathered from the flowers is true honey, afterwards thickening only from the evaporation of its watery particles. I had an illustration only yesterday of one way in which bees get rid of the superfluous water in the sweets they gather. Over a large feeding trough where I was supplying my bees with sweetened water, I could see in the sunlight that almost every bee that rose with its load, ejected a spray of water. So rapidly did the water find its way from the honey sac to the excretory organs of the bee, that the moment it rose it was enabled to get rid, I should suppose, of half the weight of its burden in the form of water. I have also noticed this in the case of bees returning from the fields during the honey season.

Pollen and Wax.—Although humoring the prevailing notion that the bees gathered wax and carried it home on their legs, by culling loads of pollen and loads of wax, Bonner argues very sensibly his opinion, that wax is an exudation from the body of the bee, as milk from the cow, silk from the spider and silkworm, or wax from the human ear.

"*Smotheration*" *by Brimstone.*—This he utterly condemns as "a barbarous practice" to be ever deprecated. Who would have supposed that such a practice could have continued to the present day?

Northwestern Convention.

The Northwestern Bee-Keepers' Association will hold its fourth annual convention at Owsley's Hall, N. W. corner Roby and West Madison Sts., Chicago, Ill., on Wednesday and Thursday, October 17 and 18, 1883, commencing at 10 a. m. on Wednesday and holding five sessions.

The Rev. L. L. Langstroth (the father of American apicluture) has promised to be present, and many of the most prominent apiarists of the Northwest will be there and aid in the deliberations and discussions.

This meeting will be held during the last week of the Inter-State Industrial Exposition, and reduced railroad fares may be had on nearly all the railroads. A cordial invitation is extended to bee-keepers every where to attend this annual reunion.

Meals may be obtained at the Restaurant near the Hall at 25 cts. each.

Beds may be secured at the Gault House for $1, or at other Hotels at regular rates.

THOS. G. NEWMAN, *Sec.*
C. C. MILLER, *Pres.*

CORRESPONDENCE

For the American Bee Journal.

Filling Empty Combs with Syrup.

G. M. DOOLITTLE.

I have employed three different ways in filling empty combs with sugar syrup, either of which is practical in accordance with the number to be filled. The object in filling combs, is the feeding of the bees in the most desirable manner, when they need feeding. That combs well filled with honey or syrup, ready to be placed in the hive when needed, is the best way to feed bees, for any and all purposes, I think will be conceded by all. For stimulating purposes I generally set such filled combs one at a time in the centre of the brood-nest, as the bees can cover them, and the queen can fill them with eggs.

If it is thought that the bees are stimulated to a greater degree when they have to carry the syrup or honey as they do from a feeder, the filled combs can be placed at the outside of the brood-nest as far from the bees as the hive will admit of; but after trying all ways, I prefer the first given. For winter feeding, the combs should be filled as full as possible, and enough placed in the hive at one time for the wants of the bees during the time they remain inactive. Syrup, for simulative feeding should be made by placing two pounds of confectioner's A sugar, or the same amount of granulated sugar in a tin vessel and pouring one pound of boiling water upon it, stirring till the sugar is dissolved. For winter stores I use 5 pounds of sugar to two pounds of water. Place it upon the stove until it boils, then skim. When cool, it is ready for the combs. I formerly used a little vinegar or cream tartar in the syrup to prevent crystalization, but latterly I have not, and do not see but it works just as well.

With this explanation we are ready to proceed as to how to fill the combs. If but few are to be filled, say 20 to 40, all that is needed is an extractor can, wash boiler, or any deep tin dish, in which to lay the combs, and a large tea or coffee-pot. Fix some sticks, or some arrangement to keep the combs 2 or 3 inches up from the bottom of the tin vessel, upon which the combs are to be laid. Now from your tea-pot filled with the syrup, pour a small stream into the cells of the comb, holding the tea-pot a foot or more above the comb, so the falling syrup will force the air out of the cells so they will be filled. Pass the stream over the combs until all, or nearly all the cells are filled on one side, when the comb is to be turned over and the other side filled in the same way. When filled hang the combs in your tin comb bucket (or some convenient tin thing which can be found about the house) a little while to drain, when it is ready to be used in any spot or place the same as a frame of honey. In filling the comb the sides of the can will keep the syrup from spattering about the room, and what is caught therein can be turned into the tea-pot again, so that no loss will occur.

When 100 or more combs are to be filled, I use a watering-pot instead of the tea-pot, upon the nozzle of which is fixed a tin "rose," which slips on to the nozzle the same as does that used in spraying plants, but instead of being like the "rose" used for plants, which throws the several streams out and from the pot, this "rose" is fixed so that the under side of it is a level flat piece of tin about 2 inches square, punched full of holes, while all the rest of it is soldered up tight. Have it beveled so that it will stand just level when your watering-pot is inclined enough to pour a stream when filled one-half full of syrup, and you have it just right. Now place your empty comb in your can as before, fill your watering-pot with syrup and pour away. Instead of filling but one cell at a time, as was done with the tea-pot, this will fill a space of comb 2 inches square as quickly as the other did one or two cells, and where no very large amount or wholesale feeding is to be done, I prefer it to any other method of filling the combs with syrup.

If I have a large amount of feeding to do, as I did in June, 1878, when nearly my whole yard was in a starving condition, then either of the above plans would be too slow to be profitable. When such wholesale feeding is to be done, I proceed in this way: An extractor can is placed upon a bench about 3 feet high, and into this the syrup is poured. Previous to this I have procured a tin dish made like a baking tin the exact size of my frame, the bottom of which is punched full of holes about 1-16 of an inch in diameter, said holes being about ½ inch apart each way. These holes should be punched from the inside of the dish, as should those in the "rose" spoken of before, so that the syrup will fall from each hole in a separate stream. Place this dish full of holes under the faucet to the can containing the syrup. Immediately under the dish place another can if you have it (if not a wash tub will answer), and you are ready for business.

If you wish to make the best time possible, have an assistant to hand you the empty combs and take the filled ones; roll up your sleeves and hold the combs near the bottom of the can, or low enough down so the air will be forced out of the cells by the falling syrup; turn the faucet so the required amount of syrup will be in the dish all the time, and you can fill the combs as fast as the assistant can hand them to you and take those filled away. When filling a large lot of combs, it is very handy to have a special rack fixed close by your can, upon which to hang your combs to drain. By placing under it several large sheets of tin set on an inclined plain, all the drip is run back into the can again. In this way all syrup is used up without waste, and if careful no daubing of anything except the utensils necessary to be used need occur.

By the above plan no expensive feeders are to be bought or made, no room in an already crowded shop has to be taken to store such feeders, and the best of it all is the feed is placed in the combs just where the bees desire it.

P. S. I am asked what is the proper space between the bottom bar of the frames and the bottom board of the hive. I prefer ⅜ of an inch, but others prefer more. Anywhere from ⅜ to ¾ of an inch would be the decision of many of our best apiarists.

Borodino, N. Y., Sept. 14, 1883.

Read at the Maine Convention.

The Coming Bee.

WM. HOYT.

In considering the above subject it will be well to look at the object for which bees are kept. A few claim, that they keep bees, for the pleasure that they derive from them, but the majority of bee-keepers look to the profits that may be derived from the sale of honey, wax and bees. Now the bees that will collect the most honey, or produce the most bees, are what we are looking for.

How are we to obtain the desired result? By judicious crossing of different strains and races, and selecting those that give the best satisfaction to breed from. The bee-keeper has the advantage over stock breeders, in not having to wait years to obtain any desired point, for even in our short summers, three or more generations can be reared in a single season. Every bee-keeper who has had one-half dozen or more colonies has noticed a great difference in the amount of honey obtained from colonies that to all outward appearances were about the same in the spring, as they had the same field in which to work, of course the difference was in the bees. Now, if honey is our object, let us rear our queens from those that produce the most honey, and we shall not have to wait long before we shall see a decided increase in our yearly average per colony.

As near as I can learn, bee-keepers through this State, take one year with another, do not average over 25 pounds of honey per colony.

Are you satisfied with this? After four years experience with the yellow bees, I have become satisfied that they are better honey gatherers than the blacks. I do not wish to be understood that every colony showing yellow bands will gather more honey than the blacks, but that they will average better. Perhaps a word in regard to the different qualities shown by the different races of bees may help to determine some one in their course of action in the future.

The Italians are very prolific, industrious, beautiful and amiable, and will gather honey in times of scarcity when the blacks are idle, but probably owing to the last named quality, are more liable to suffer from dysentery and spring dwindling than the blacks.

From my own experience, and what I can learn from others, I have no doubt that the Cyprians are the best honey gatherers known ; one colony in Texas gathering over 800 pounds of honey. They are remarkably prolific, and are the most beautiful bees with which I am acquainted. As to their disposition, authorities differ so much that it is hard telling anything by what we read about them. My experience with them in this respect is about as follows : While they are gathering honey from any source, or being fed, I can handle them with ease, and much faster than any other bees, and with less stings ; owing to the ease with which they can be shaken from the combs, they are the best to extract from, but after the honey season is over let them alone, and at any time during the season it will not do to show any fear.

My experience with Holy Land bees is somewhat limited. I believe their principal claim is in being more prolific than any other race, and are as amiable as the Italians. In my opinion the coming bee must possess the energy and hardiness of the Cyprian, and docility of the Italian, combined with the prolific qualities of the Holy Land bees.

I am not prepared at the present time to mark out any particular course for the bee-keeper to pursue, but be not content with an average of 25 pounds of surplus honey per colony, when some of our best give 100 pounds or more The work of improving the present bee, is not destined to be the work of one person. The queen breeder will endeavor to produce whatever quality his customers call for ; if they are satisfied with and call for rings and bands, the queen breeder will produce them if the purchaser demands good honey gatherers in preference to color, they will be forthcoming.

The old style of bee-keeping had one advantage over the present method, as it gave full scope to that natural law, "the survival of the fittest," as all colonies that had not succeeded in gathering a winter's supply of stores were either consigned to the brimstone pit or left to starve, while under the present management, colonies that are short of stores are fed, and every queen kept alive if possible ; whether they possess any good qualities or not, thus often keeping alive queens that in the end may prove a positive injury to their owner.

In my opinion a queen should not be tolerated in an apiary unless her progeny are possessed of the following qualities :

First.—Good honey gatherers.
Second.—Hardy to winter.
Third.—Easy to handle.
Fourth.—Yellow bands.

There is much more that I would like to say upon this subject, but as I have already taken up too much of your valuable time, I will only say, do not be satisfied unless your bees are good honey gatherers, hardy to winter, easy to handle, and possessed of yellow bands—thus hastening the arrival of the Coming Bee.

* * *

For the American Bee Journal.

Wintering on Summer Stands.

J. E. POND, JR.

To those who desire to follow the strict rule of nature, it must seem conclusive that our bees should be wintered on their summer stands. It may be argued that domesticated bees are not in a state of nature, but that argument carries little weight, as the only change made in causing them to subserve to the best interest of man, is that of furnishing them with a better and more comfortable home for themselves, and one that is more convenient to manipulate by its owner. As a matter of fact, bees are not domesticated, as are the ordinary domesticated farm animals. They are never tamed ; true by selection we may rid them of bad qualities to a certain extent, and to a certain extent improve them, but till we can fully control the matter of fertilization, the work of improvement will not be complete, however satisfactory may be our approximate results. In the matter of wintering, if we assume correctly, that our bees *should* be wintered safely on summer stands, the question will at once arise, "how can this be done ?" If done at all, it must necessarily be done in accordance with natural laws ; and when we ascertain fully and completely just what those natural laws require, in order to accomplish this end, then the problem is solved, and the question correctly answered. Of course it cannot be expected that every colony in an apiary will be wintered successfully. Death is the great leveller, and all animate things must bow submissively to the reaper's stroke ; the point is to reduce winter losses to a minimum.

In order to ascertain a remedy for disease, the first thing is to make a correct diagnosis ; so with our bees, if we wish to learn how to prepare them, so they will pass safely through a long period of wintry weather, we must first learn what it is that destroys them, when no measures are taken for their safety. In some cases bees die of starvation, and that, too, when plenty of honey is contained in the frames, and in all probability this is in nine cases out of ten the cause of loss. If a sufficient amount of honey is not given to support them, when the colonies are left to the tender mercies of an inclement winter, we must expect to lose them ; for that reason it is assumed, as every one now leaves sufficient stores in the hive to support the colony, that the cause of loss is the inability of the bees to reach the honey furnished them. I have been so successful in wintering, that for 16 years I have not lost a colony on standard Langstroth frames on summer stands. This I do not consider luck, but the result of following the natural laws which govern the honey-bee, when in a state of confinement, owing to severe wintry weather.

My method of preparation assures the placing of stores in the hive, in such position that the bees can at all times and under all circumstances have access to them ; also in so packing the colony that all excess of moisture will imperceptibly pass off from the hive, and not be allowed to remain and cause death, by embracing the cluster in its icy fold, when unable to generate a sufficient amount of heat to prevent it from freezing. I do not believe that any ordinary colony is destroyed by cold ; I have seen a colony exposed in a box hive without any bottom board, for ten days with the themometer standing from 5° to 14° below zero, without injury, which is proof sufficient to me of the correctness of my belief. What then does destroy the colony ? My answer is excess of moisture allowed to remain in the hive, which is condensed to ice, owing to the inability of the colony to generate heat sufficient to counteract it, or else inability of the cluster to pass from one comb to another after having used up the stores within its reach. If I am correct—and who can prove that I am not ?—the remedy is plain and simple. I have assumed, and still assume, that much depends upon the form of frame that is used, and claim with a large degree of pertinacity that the standard Langstroth is the correct form ; this, however, is a matter of opinion which I claim the right to hold, and which I do hold only after many experiments with it, side by side with other and deeper frames. However much may depend upon the form of frame, the other conditions mentioned are essential, and I fully believe that any one who accepts and makes use of them in preparing for winter, will meet with the minimum of loss.

Foxboro, Mass., Sept. 7, 1883.

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For the American Bee Journal.

Iowa Bee-Keepers' Association.

At a meeting of the bee-keepers of Iowa, held on the State Fair grounds at Des Moines, on Wednesday evening, Sept. 5, after a full and free discussion of the bee business and its interests, it was voted to organize a State Association. Rev. O. Clute, of Iowa City, was elected president, and L. E. Cardell, of Malcom, secretary, and M. Sorrick, of Des Moines, treasurer for the ensuing year. The president, secretary and treasurer, together with Mr. O. O. Poppleton were appointed an executive committee. It was decided to hold a meeting of the association on the State Fair grounds next year, on Wednesday of the Fair week.

The project of having the society's headquarters in a tent owned by the society on the Fair grounds, was talked over. It was thought that in such a tent meetings could be held every evening during Fair week, and papers could be read, and discussions held on points of interest. It was suggested that if bee-keepers would come to the Fair prepared to camp on the grounds near the headquarters, we could have a bee-keepers' colony for the week, which would be pleasant socially, and profitable in arousing interest in bee-keeping, and diffusing a knowledge of the subject. President Clute and his two older sons, and two of his students in bee-keeping, were so encamped this year, and found it a delightful and inexpensive method of spending the week. All persons present were requested to talk with bee-keepers in their vicinity and secure their names as members.

A vote of thanks was tendered to Rev. O. Clute for the hospitality of his tent for the meeting.

L. E. Cardell, *Sec.*
Malcom, Iowa, Sept. 7, 1883.

For the American Bee Journal.

Careful Experiments with Queens.

H. L. JEFFREY.

Ever since 1876 I have been trying to solve the problem and test a probable cause and remedy for the reason that good queens taken from a hive and shipped never give their receiver as good results as their shipper had received or reported. My attention was most strongly directed in this course, in the spring of 1877, by the receiving of two queens from one of the best breeders. Both queens were shipped the same day; one by mail, in a cage, the other in a 4-frame nucleus by express. Both taken from very strong colonies; the shipper said they had 7 American frames full of brood (it was the first week in May), and were of the previous season's rearing. I introduced the one coming by mail, to a strong black colony, and built up the other. The one received by mail did scarcely anything; the other I increased up to 6 with the help of a black colony, whose queen I killed on receipt of the nucleus, giving the black bees brood from the Italian queen, as her combs had eggs and larvæ in, when they came, and I gave all the brood combs from the black colony to the Italian queen, dividing the Italian colony when the cells were 24 hours from hatching. The queen, by mail, was introduced to a very strong black colony, and given, as I then thought, an extra good chance, but she did not prove to be good for a 3-frame nucleus, and I had to help her colony from the other, all summer, and helped them for winter and some more the next spring. The next summer she did some better, but she never kept up with the nucleus queen. I, of course, said the mail was the cause. By thorough and numerous experiments, I now say it was not caused by being sent by mail, but by not being properly conditioned before being shipped, and by being put into a very strong colony when she was received.

Now I will tell you how I proved it against the two causes, and not against the cause of being carried in the mail. An accidental occurrence, where I was going to take off a queen to introduce, but finally sent her by mail, opened a gap in the mystery. I took the queen and 2 or 3 frames of bees out of the hive and set them in a nucleus. She stood so, nearly a week (when in her own hive she had 9 Langstroth frames of brood, well filled), there being mostly young bees in the nucleus. She was sparingly fed, and consequently laid sparingly, and, of course, was in the best possible shipping condition, as was afterwards proved. This was the last of June, 1878. She was sent on a three-days journey, by mail, and was put into a two-frame nucleus, made by taking a frame of hatching brood each from two hives, and was built up to a strong colony, in the same way as the nucleus was made, as fast as she wanted room, and by the first of August, she again had 9 frames of brood of her own.

Several other queens, equally good, were caged, from strong colonies, and mailed at the same time, but they proved poor things. Why was this one as good as ever, and the others worthless? I thought over it and asked a few who had received queens to try to help me solve the mystery, but with no satisfaction. I then resolved to try some experiments to know why. For this purpose, 8 prolific queens were selected; 4 of them were put into nucleus hives; the other 4 were left as they were; in 5 or 6 days the whole 8 were caged, but marked 4 A and 4 B; all were tied in a bunch and thrown into the stage; if the package was in the way, it was kicked out of the way. In two days the package was opened, the bees fed and examined, again done up and subjected to two days more of kicking and throwing around; in no way was any pains taken to handle them carefully, but some to the opposite. After six days of such usage, as rough as could be given in the mail bag, 2 A queens and 2 B queens were given to strong colonies; the 4 remaining ones were given to nuclei, composed of 2 frames of hatching bees; the two queens given to the nuclei, in the course of a month, appeared to be as prolific as ever; the two queens given to full colonies did not do as well as before. The two taken from the strong colonies and then introduced into nuclei were doing fairly, but did not recover their former fertility that season, and the two remaining queens, not conditioned and introduced into strong colonies, were never more than half as good as they were before the experiment. This made link No. 1 in both ends of the chain—proper condition to ship and proper care to recover the journey.

The above experiment was tried during the heighth of the season of 1879. In 1880, three more experiments were tried, one in the spring, one in the honey flow, and one in the fall; the result showed by both careful and rough handling, that the shipping by mail or the rough handling, that the way prepared for shipping, and the way dealt with after receiving, made the most difference. Over 60 different queens were used, some just commencing to lay; but the most of them were one year old.

I tried several experiments in 1881, by shipping two queens to the same person, when receiving an order for one tested queen; requesting a report of how they were for being prolific, condition the tested queen and send the other that had been laying 2 or 3 weeks right from the hive to the mail bag.

The result has always shown that a queen which has been shipped is in a convalescent state, and if put into a situation to be copiously fed on her receival, is forced into prolificness, and like a convalescent person who is forced to hard work, of course has recovery retarded for a time, if not wholly prevented; and when valuable queens are received, they should be handled with care, and, as a rule, should not be used for breeders immediately, if the best results are expected.

Washington Depot, Conn.

For the American Bee Journal.

Mahoning Valley, B. K. Convention.

The August session of the Mahoning Valley Bee-Keepers' Association was held in Grange Hall, Newton Falls, on Saturday, the 18th. The day was all that the most sanguine could wish for. A large number were present; a number of bee-keepers from abroad. A large display of honey was on exhibition, showing a creditable advancement.

At 11 o'clock President Carson called the meeting to order.

The minutes of the last meeting were approved.

The Chair then appointed the following committee on exhibits: C. G. Beardsley, William King and Warren Pierce.

There was some preliminary business which occupied the attention of the meeting for a short time, then adjournment to dinner, as usual. Sociability and an excellent dinner were important features of the short noon recess; after this had been discussed, and the committee had made their examination of honey on exhibition, our president called the afternoon session to order, and announced the questions in question box now in order:

"How many colonies can be properly kept in one locality?" Mr. Streeter thought it impossible, at present, to overstock a locality, so few were engaged in the business. Mr. Page said it was a matter of business capacity in the one that engaged in it; 5 colonies of bees would overstock some, while a hundred would not be too many for others.

"Is white clover the most profuse in honey?" Mr. Oviatt thought that white clover produced most of the honey gathered by the bees. Mr. Simon thought that basswood was the most profuse in honey, at least in his section of country.

"Is honey ripe before it is capped?" Mr. Oviatt said, he had observed that the longer honey remained in the hive the riper it gets; atmospheric influences change the condition of the honey in a measure.

"Why is it that Syrian bees do not cap their honey as soon as Italians?" Mr. Simon thought it was the field bees that capped the honey. Mr. Moore said, it was the young bees under ten days old.

"How far will bees travel to gather honey?" Mr. Page said, he had known his Italians to go 2½ miles.

"How shall we keep our empty combs over winter?" Mr. Simon said, after a few cool nights in late fall, store them in a loft of a house or barn, so that mice will not get at them. Mr. Carson said, he left his in the hives and placed them in a cool dry place, and kept the mice from them.

"What would you do with combs that are moldy?" Mr. Page said, he put a few frames at a time into a strong colony, and let them clean them.

"Which is the best, old or new foundation to put in frames?" Mr. Carson said, that his bees work on foundation a year old, as well as new. Mr. Page preferred new. Mr. Streeter preferred the new. Mr. Hubbare, of New York, has a Given press he puts the wire and foundation in at the same time. Mr. Pierce said, he had used some of this kind of frames and liked them very much.

"Can we rear as good queens artificially as by natural means?" Mr. Pierce preferred a queen reared by the natural means. It was generally concurred in by all.

"Has any one had any trouble from killing ants on the hives, and does the odor from the dead insect irritate the bees?" Mr. Oviatt had not noticed any inconvenience. Mr. Pierce said, he had been troubled a great deal by ants. Mr. Carson said, sprinkle salt around your hives.

Mr. S. Oviatt placed on exhibition one can of extracted and five one-pound sections. Mr. C. B. Page one can and two cups of extracted honey, also two cages of Italian bees. Mr. L. Carson one can of honey.

The executive committee then announced that the next meeting of the association will be held at Newton Falls on the first Saturday of November.

The Chair then appointed the following essayists for our next meeting: C. P. Page and H. A. Simon.

Adjourned to meet the first Saturday in November, at Newton Falls, O.

E. W. TURNER, *Sec.*

For the American Bee Journal.

Posey County, Ind., Honey Show.

J. M. HYNE.

Our Fair closed yesterday. The display of bees, honey and implements was very good. I took the first premium on the best Italian bees, also on the best Italian queen. I obtained eleven dollar's worth of premiums, and sold some implements, bees, and 300 lbs. of honey. Our show had a good effect. We have awakened up the bee interest beyond my expectation, and I think next season I shall be able to show a good report from Posey county. I think the only way to get reliable statistics, is to work up each county, say one man take charge of each county; if he does not wish to travel all over it himself, let him appoint one man in each township; surely there is one in each township that will take enough interest to see every man and get his report. Then we can have a report that will be reliable. I am willing to canvass this county. I have talked with men of some of the townships that are willing to help in the good work. The report I have taken is as follows: 42 bee-keepers, 602 colonies last fall, 518 last spring, 1,055 now, 5,355 lbs. of comb honey, 4,800 lbs. of extracted honey; total, 10,155 lbs. The above report shows a poor season; at this time last season, bees were doing well. If it had rained in time, bees would have done well this season, as we had a fine prospect, but everything is drying up now, and I expect to hear of a great many box and gum hive men going out of the business, as their bees are already swarming out. My bees are in good condition for winter.

Stewartsville, Ind., Sept. 15, 1883.

SELECTIONS FROM OUR LETTER BOX

Do Not Slaughter your Crop.

Fruit is scarce. The drought and frosts will make butter high, and honey is only a partial crop, in very many places, after all of the flattering promises held out in the early part of the season, and now let us look for and get prices that will enable us to pay the high figures that we must for other products that we do not produce and must have. Here the crop is only about one-half of an average of early honey, and the late crop being a total failure, we can boast of only one-third of a crop for 1883. It is of excellent quality, however, and if we get a fair price (which we shall try hard to do), we will live, and live to hope for better results for 1884. JAMES HEDDON.

Dowagiac, Mich., Sept. 12, 1883.

White Clover Yield.

Bees in frame hives have done very well around here this season. White clover was very abundant and yielded the finest honey I ever saw. We have no basswood around here, but have to depend on clover alone for surplus honey. We get no surplus from fall bloom. Bees in box hives did very poor, having swarmed too much. I am using the Quinby closed end frame hive, and I am well satisfied with it; have not lost any during the winters. I think I can winter them every time by packing with chaff or fine cut straw. Comb honey is selling for 18 to 20 cts.; extracted, 12½ cts., home market. GREEN R. SHIRES.

Adamsville, Ohio, Sept. 9, 1883.

100 Lbs. to the Colony.

On page 444 of the Weekly BEE JOURNAL for Sept. 5, you give me the credit in my communication of extracting 2,200 lbs. of honey, instead of 22,000 lbs. 110 lbs. to the colony is small enough when Messrs. Harriman & Adams' yield was over 200 lbs. Please correct the error.

O. M. BLANTON.

Greenville, Miss., Sept. 8, 1883.

[The omission of the cypher was an oversight of the printer, but makes a vast difference.—ED.]

Frozen Honey.

On the nights of the 8th and 9th of this month, there was frost enough here to kill most every green thing. Corn was cut very bad, and the farmers are busy cutting it up. One man told me, the other day, that his corn stubble was just alive with bees. Another said his hands felt as though he had honey daubed all over them after cutting corn. I shall watch and see how much of that kind of sweet they get; perhaps not enough to be of value to them for wintering. What I have seen of that kind of honey, is thick and has a good taste. No fall crop here yet to speak of, and the prospect is slim now of our getting any to speak of. W. H. SHIRLEY.

Glenwood, Mich., Sept. 12, 1883.

Filling Empty Combs with Syrup.

In the BEE JOURNAL, Mr. Doolittle speaks of filling empty combs with honey or sugar syrup for stimulative feeding.

1. How is it to be done?

2. What is the proper space between the bottom bar of the frames and the bottom board of the hive?

Will Mr. Doolittle please answer through the BEE JOURNAL?

T. C. GIDDINGS.

Aspen, Colo., Sept 1, 1883.

[Replies to the above queries, may be found in Mr. Doolittle's article on page 497.—ED.]

Curious Freak of Bees.

In reply to Mr. Heddon's question, on page 433, I would say that it was the next day after they had swarmed that I looked, and from all appearances the cell was capped before they swarmed. A. RICKENBACHER.

Gahanna, Ohio, Sept. 3, 1883.

A Large Yield.

We have had the best honey season ever known in this part of the State, to my knowledge. Clover and basswood were in bloom longer than usual. From 5 colonies, spring count, I took 900 pounds of comb honey, and an increase of 13; did not take a pound from the brood-chambers, which are full of honey; will extract some when I put them in winter quarters, to make sure to leave them enough until next spring. The fall flowers yield but little nectar, because it is too dry. I have one swarm that I hived June 3, from which I took 180 pounds of comb honey. How is that for this part of Indiana?

JOHN W. STURWOLD.
Haymond, Ind., Sept. 14, 1883.

Is Smoke Injurious to Bees?

I have recently bought and had in use a "Conqueror" bee smoker, and I am very much pleased with the power it gives me over my bees, and by its other qualities; but what I should like to know from some of your correspondents who have doubtless had more experience, is whether the very pungent smoke from the use of sound wood has no deleterious effect on the delicate larvæ and eggs of the bees. Please will some of your correspondents, or Messrs. Doolittle and Heddon give their experience in the columns of your valuable JOURNAL.

JOHN MARTIN.
London, England, Sept. 8, 1883.

[Will Messrs. Doolittle, Heddon, and others please give a brief reply to the above question, as requested by Mr. Martin?—ED.]

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Alsike Clover Hay.

Will Mr. Heddon please answer the following questions through the BEE JOURNAL:

How does Alsike clover compare with red clover in the following particulars: For hay, for pasture, for fertilizing the ground, and will it pay to raise it here, where red clover does very well, but is a little inclined to freeze out in winter, not taking into consideration the bee pasturage?

G. W. WILLIAMS.
Economy, Ind., Sept. 12, 1883.

ANSWER.—Alsike clover makes better hay than red clover, it being more tender and finer. Stock prefer it either in hay or pasture. As a fertilizer, I do not consider it equal to red clover. Chemistry tells us that red clover takes the largest proportion from the atmosphere and less from the earth, making it the best fertilizer of any we have. This may be called stealing from your neighbors. My own opinion is, that there are few places in the United States where it will pay to supplant red with Alsike clover, if bee pasturage is not to be considered.

☞ The Cass County Bee-Keepers' Association, organized on the 15th of August, will meet on the 10th of October, 1883, in Logansport, Ind. All persons interested in bees and honey are respectfully invited to come. DE WITT BROWN, *Sec.*

☞ The Bee-Keepers' Association of Central Illinois will hold its next meeting on Wednesday, Oct. 10, at 10 a. m., at 205 South Main street, city of Bloomington. All interested, in this and adjoining counties, are invited to attend. J. L. WOLCOTT, *Pres.*
JAMES POINDEXTER, *Sec.*

☞ The Union Kentucky Bee-Keepers' Society will hold their fall meeting in Petry's Hall, in Shelbyville, Ky., on Thursday, the 4th day of October, 1883. All bee-keepers, and the public generally, are invited to be present.

G. W. DEMAREE, *Sec.*
Christiansburg, Ky.

☞ The next regular meeting of the Mahoning Valley Bee-Keepers' Association will be held at Newton Falls, O., on the first Saturday of November, 1883. L. CARSON, *Pres.*
E. W. TURNER, *Sec.*

☞ The quarterly meeting of the Marshall County Bee-Keepers' Association, will be held at the Court House, in Marshalltown, Iowa, on Saturday, Oct. 6, at 10.30 A. M. Subject for discussion, "Fall and Winter Care." All interested, in this and adjoining counties, are invited, for we hope to have a good meeting, and one of benefit to all.

J. W. SANDERS, *Sec.*
Le Grand, Iowa.

☞ Please announce that the Iowa Central Association, will meet at Winterset, Iowa, Nov. 2, 1883.

Z. G. COOLEY, *Sec. pro tem.*

☞ The Wentworth, Ont., Bee-Keepers' Association, will hold their next meeting in the Secretary's office, on the Central Fair Grounds, Hamilton, on Wednesday, the 3d of October, commencing at 1 p. m. All interested in bees and honey, are requested to attend.

ALEX. ROBERTSON, *Sec.*, Carlisle.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

How to Create a Market for Honey.

We have now published another edition of the pamphlet on "Honey as Food and Medicine," with more *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy **5** cents, postpaid; per dozen, **40** cents; per hundred, **$2.50.** 500 will be sent postpaid for **$10.00**, or 1,000 for **$15.00**. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit. Try it, and you will be surprised.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a statement of account every week.

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1 year, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with $6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For four subscribers, with $8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with $10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

* * *

Books at Fairs.—Those who make an exhibit at Fairs will find that an assortment of Books and Pamphlets would sell and leave them a profit for handling. We will send such, postage prepaid, at 25 per cent. discount; or if the purchaser pays express charges, we will supply any of our own publications at 40 per cent. discount.

* * *

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

* * *

☞ The new two cent rate of postage for letters goes into effect on October 1. Three cent postage stamps will then be but little used. For all fractions of a dollar sent to us hereafter we should prefer either *one-cent*, or else five or ten-cent postage stamps, or a Postal Note. Do not send coins in any letter.

* * *

Fairs.—To any one exhibiting at Fairs, we will send samples of the BEE JOURNAL and a colored Poster, to aid in getting up a club. The Premiums we offer will pay them for so doing. For a club of 8 subscribers to the Monthly BEE JOURNAL, or 4 Weekly, we will present Dzierzon's Rational Bee-Keeping, price $2.00.

* * *

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., Sept. 24, 1883.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—The demand for extracted honey is exceedingly dull; for comb honey, only fair; arrivals are plentiful. Stocks are large in the hands of corn merchants and others. Our own supply is larger than ever, and, for the present, we cannot compete with commission merchants. We may have to offer lower figures. Our prices so far were 7@9c. for extracted, and 14@16c. for comb honey on arrival.

BEESWAX—Arrivals of beeswax are good at 25@28c., and the demand is fair.

CHAS. F. MUTH.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 18c. Dark and second quality, 14c.; extracted white clover in kegs and barrels, 11c.; dark, 8c.

BEESWAX—Prime yellow, 30@31c.

H. K. & F. B. THURBER & Co.

CHICAGO.

HONEY—Comb honey has been bought with more freedom this week, and prices of last week have been fully sustained. The cool weather has started up the usual fall trade, and activity is the order of the hour. In selecting out the best consignments (with the exception of one round lot taken by merchants from Dakota Territory), our demand is chiefly local. Extracted honey has not been sought for to any extent, yet there is an improvement over last week in the amount sold. Comb honey, extra white 1 lb. sections, 18c.; comb honey, extra white 1½ to 2 lb. sections, 15@17c.

BEESWAX—Steady and quiet, at 25@35c., as to color, etc.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—There is a moderate supply of comb and extracted of common quality, but offerings of extra choice comb are very light. The sales being effected are within range of unchanged figures. White to extra white comb, 16@20c.; dark to good, 10@13½c.; extracted, choice to extra white, 7½@8½c.; dark and candied, 6½@—

BEESWAX—Wholesale, 27@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Some little inquiry for choice comb, from grocers, at 14@16c. in fancy packages, but little or no demand otherwise. Offerings are liberal of strained and extracted, and dull at 6½@7c. Old and dark comb nominally cheap.

BEESWAX—Was selling at 25@26c.

W. T. ANDERSON & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—Comes very slowly and sells as fast as it comes at 18@19c. for best white in 1 lb. sections, and 17@18c. for 2 lb. sections. Second quality is very slow. Extracted usually sells very slowly in our market; as yet, no extracted has been received.

BEESWAX—None in Market.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—We quote our market at 18@20c. for 1 lb. white clover; 18@19c. for 2 lb. white clover. Extracted is in good supply, and selling from 9@10c.

BEESWAX—Our supply is gone; we have none to quote.

BLAKE & RIPLEY, 57 Chatham Street.

* * *

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

* * *

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

Trial Trip—25 Cents.

As the season for Fairs has arrived, and wishing to be able to reach several thousands of the old-fashioned bee-men, and by the aid of the BEE JOURNAL to lift them up to higher ground, adopting newer methods and progressive ideas, we make the following very liberal offer: We will send the Weekly BEE JOURNAL *three months on trial, for 25 cents*. In order to pay for getting up Clubs, we will give a copy of Fisher's Grain Tables, or Scribner's Lumber and Log Book, to any one who will send us five trial subscriptions (with $1.25); for a club of *ten* we will give a cloth copy of Bees and Honey; for a club of 15, a cloth copy of the 7th edition of Cook's Manual of the Apiary; for a club of 25, we will present both the Manual and Bees and Honey. If any one wants these Books for nothing, here is on excellent opportunity to get them for a little exertion.

* * *

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

* * *

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

* * *

☞ Articles for publication must be written on a separate piece of paper from items of business.

FOR SALE—Very cheap, 23 colonies of BEES. 17 colonies in Simplicity hives, and 6 colonies in Champion hive. All in good order for winter.

T. W. THOMSON,
39A1t MT. VERNON, IND.

BINGHAM SMOKERS.

I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including THE CONQUEROR, and THE DOCTOR.

Send for my 32-page Illustrated Catalogue of Bee-Keepers' Supplies of every description.

ALFRED H. NEWMAN,
923 W. Madison, CHICAGO, ILL.

Don't Fail to Read This!

Only One Impure Queen Out of 950 Sent Out this Year!

The Queen received from you is the finest one I ever saw. She is remarkably prolific, producing fine large workers, each bearing the three bands of gold. W. H. WESTON, London, Ont.

I have 3 or 4 bee books, but yours goes ahead of all the others. WM. FLICKINGER, Doylestown, O.

Book (bound in cloth) and Tested Queen sent for **$2.00** during September only.

Tested Queen............................$1 50
Handy Book 1 25

HENRY ALLEY,
36A2t Essex Co. WENHAM, MASS.

OLDEST BEE PAPER IN AMERICA
THE AMERICAN BEE JOURNAL
ESTABLISHED IN 1861

VOL. XIX. CHICAGO, ILL., OCTOBER 3, 1883. No. 40.

THE AMERICAN BEE JOURNAL
Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

Abuse is Not Argument.

Mr. Hamet, the publisher of *l'Apiculteur*, in Paris, is opposed to movable frame hives. Fifteen years ago he wrote that the main quality of such hives was to be pulled to pieces like a pack of puppets. The honey extractor was, to him, a useless toy. He has continued since to fight against every new idea or improvement, and when we were in Paris, he ridiculed every thing in progressive apiculture which we use in America.

Mr. Hamet asserts that foul brood is generated by the use of frame hives. Mr. Chas. Dadant, of Hamilton, Ill., who has for years been writing for the European bee papers, has taken the ground that foul brood was propagated by contagion.

Last spring Mr. Bertrand, editor of *D'Apiculteur*, published a lithograph of Mr. Dadant, and was censured by Mr. Hamet for so doing; at the same time Mr. D. was assailed in the most vindictive manner. In the *l'Apiculteur* for August, Mr. Hamet renews the attack, more ferocious than ever, without the least provocation or excuse.

We exceedingly regret to see that Mr. Hamet has seen fit to use malicious personal abuse instead of argument. He also asserts that Mr. Dadant has been published as a humbug and swindler in *Gleanings*, and calls him anything but a gentleman.

Mr. Root justly denies that he had ever thought of publishing Mr. Dadant as a swindler. To us who have known Mr. Dadant for 10 to 20 years as one of the most gentlemanly, honest and progressive apiarists of America, these insults are very annoying and perfectly unjustifiable.

It is a very poor way for any one to resort to malignity instead of using argument, but the use of such is more detrimental to the calumniator, than to the person maligned.

We should have taken no notice of this, were it not that Mr. Hamet assails him as a representative American apiculturist, and of no reputation for honesty, at home or abroad. How much better it would be to

Let all our words be full of truth,
Let kindly feelings reign;
Do good to all, and let our smiles
Leave blessings in their train.

☞ Mr. A. J. King, editor of the *Bee and Poultry Magazine*, is going on a trip to Cuba this month—we presume for the benefit of his health. The BEE JOURNAL wishes him a pleasant journey and a safe return.

☞ Several frosts have already occurred in many parts of the country, killing some of the fall bloom, but in other parts, the bees are reported to be at work quite vigorously.

☞ At the Fair just held in Madison, Ind., Mr. H. C. White carried off all the premiums except one (which was the second premium on display of honey, and was awarded to Mr. S. D. McIntyre). Mr. White displayed comb and extracted honey, bees, hives, extractors and supplies for the apiary. We congratulate him on his success.

Alsike Clover.—The Indiana *Farmer* says that Mr. Alonzo Tyner, near Greenfield, Ind., grew several acres the present season in the same field with red clover, and said that the bees worked on it incessantly, and it was in its prime after basswood was over. Upon later introducing the stock into the field, the Alsike clover was eaten to the ground before they would touch the red clover.

Honey at the Iowa State Fair.

The Iowa *Homestead* has the following item concerning the honey exhibit at the Fair:

> The Bee Department was a very attractive feature of the great Fair. Rev. O. Clute, of Iowa City, and J. J. Kizer, of Polk county, who are among the most intelligent and successful bee-keepers of the West, drew great crowds of people around them during the entire Fair, as they patiently and cheerfully explained the interesting processes of bee-keeping and honey producing. No feature of the Fair attracted more attention or awakened more interest.

☞ The total value of the exhibits in the bee department of the Michigan State Fair was placed at $1,088.50, and the amount of the premiums awarded was $189. The building devoted to bees and honey, at the recent Fair, was well filled with everything of interest to bee-keepers. The exhibition of "supplies" was large, and attracted considerable attention from many who were not interested in apiculture. The "Bee-Keepers' Hall" was specially built for the purpose, and was a great attraction.

☞ We have just received from the publishers a copy of the Album Writer's Friend, containing nearly three hundred selections suitable for writing in Autograph Albums. Those of our readers who have been invited to inscribe their sentiments in a friend's Album, will find this little volume a valuable help. It contains 64 pages, and will be sent by mail, post paid, on receipt of 15 cents, by J. S. Ogilvie & Co., Publishers, No. 31 Rose Street, New York.

☞ The next regular meeting of the Mahoning Valley Bee-Keepers' Association will be held at Newton Falls, O., on the first Saturday of November, 1883. L. CARSON, *Pres.*
E. W. TURNER, *Sec.*

North American Bee Convention.

REPORTS OF VICE-PRESIDENTS.

The first report was from Dr. Miller, of Illinois. The season in that State. he said, was unfavorable. Even when white clover came, the bees lacked energy to go out and gather honey. Those who had fed bees during the winter did very well. The flow of honey from clover closed up earlier than usual, and since then they had none. About three-quarters of a crop had been obtained.

Dr. J. P. H. Brown, of Augusta, Ga., gave a fairly favorable report. The last report of the Commissioner of Agriculture in this State showed a product of only 27 pounds per colony. The horsemint, on which they depended largely, yielded not a single drop of honey, so far as he knew. A succession of heavy frosts in April had killed the bloom. The honey in Georgia generally was of amber color, and, for some reason which he did not quite understand, it was a few shades lighter this year than usual.

Judge Andrews, of Texas, stated that in North Texas the crop was very light, not more than 10 pounds per colony, but the honey was of very superior quality. It was obtained chiefly from rattan and honey locust, which came into bloom early in May. During the horsemint season (that plant yielded little or nothing) there was the most intense excitement among the bees if the hives were opened, or any attempt made to take the honey. In middle Texas there had been on the whole a good flow—a finer crop he had never seen. In West Texas the country had been settled for only three or four years, and few bees were kept.

Mr. O. O. Poppleton reported for Iowa. The yield of white clover honey in that State was heavy, but since that, there had been nothing. This was the worst season for robbers he had ever known.

Mr. Hart, of Florida, gave a very interesting report of bee matters in his State. The yield was an average one, but was from rather different resources than usual. Some of the bees swarmed as early as the 16th of February. In March came a drought, and the honey flow ceased almost entirely. In May the bees began to gather from the palmetto, bay and mullberry, but the crop from the last-named was very small. The bees took in the coast counties, took large quantities from the black mangrove which grows along the shore, and the roots of which are covered at high water.

Prof. Cook, of Michigan, reported that so far as he could learn, Michigan had got only half a crop. About 50 or 60 pounds per colony would be a fair average, of which one-third was comb honey. The season in the early part of the year was very rainy and very cold, but notwithstanding this the bees were very busy.

Mr. Jones—Have you many Canadian thistles?

Prof. Cook—I am glad to say we have very few. There was a droughty fall, and it seemed there could be no more honey, but still the bees worked hard, and now, even though the frost had come upon them, the honey continued to come in.

Mr. W. C. Pelham, of Kentucky, reported on behalf of his State. The yield, he said, was much above the average in the white clover region, but in the mountainous region of the State, it was rather above the average.

Mr. Porter, of Colorado, reported about an average yield, notwithstanding that the spring was unfavorable. About a hundred pounds to the colony would be about the figure. A letter was read from J. L. Peabody, of Colorada, reporting only half a crop. They had snow in June, and frost in July and August. The Rocky Mountain bee plant had come along well in the dry, sandy soil, and the bees got a good harvest from it.

Mr. C. F. Muth, of Ohio, reported fully an average crop, partly from the locust, but mainly from the white clover. About 130 pounds per colony would be an average. After clover was over, the bees produced no more, in fact, they lost stores. His own bees had not stores enough to winter on, but in the few bright days after the recent frost, they had resumed work. He was sorry to say that honey had been forced upon the market in Cincinnati. He had been offered the best clover honey at 8 cents, or 8½ cents a pound. He had advised the bee-keepers to hold their stocks until the prices got better.

Mr. McKnight, of Owen Sound, President of the Ontario Bee-Keepers' Association, was called upon to report for Ontario. He cordially welcomed the representatives from a distance. The Ontario Association had been in existence only three years. He explained the system used by the Association in securing statistics, which was, to send to members of the Association slips with questions regarding the mortality of bees, increase, crop, etc. This year 48 out of 84 members reported. These reports showed a total yield of 211,772 pounds, an average of 106 pounds per colony. The average yield for the three years was 66 pounds per colony. The season this year was a strange one, the spring was backward, but on the other hand, the fall continued three weeks longer, making up for that to some extent. The principal sources of supply were the white clover, basswood, and Canada thistles. Among advanced bee-keepers there was very little out-side wintering.

Mr. Vandervort, of Pennsylvania, said he always found it hard to get reports. When there was a bad season bee-keepers were too busy to report. The early spring was favorable, but later, the season was wet and prevented the bees from working. There was only a half crop of honey, but a fair average of increase.

James D. Long, of Granby, supplied the report from Quebec. There had been a yield of fully 100 pounds per colony.

Rev. W. F. Clarke reported for Manitoba. Before doing so, he desired, as perhaps the only one from Canada who had been present at the foundation of the Association, to express the pleasure it gave him to welcome the delegates to Canadian soil. He had learned since leaving that a few colonies of bees had been kept in the old settlement of St. Boniface, but had not known anything of them while there. He had seen only one bee while there, a stray Italian who had come from California in a box of fruit. The old friend of the Association, Mr. Wallbridge, was now Chief Justice of Manitoba, and resident in Winnipeg. He had had several "conventions" with the Chief Justice, and in company with him had examined the flora of the country. He had never seen such a magnificent yield of white clover, and was sure the bees would do well on it. Chief Justice Wallbridge was strongly of opinion that the steadiness of the climate would be favorable to wintering bees, and he intended to enter upon the practical work of bee-keeping.

PRESIDENT'S ADDRESS.

At the request of President Jones, Mr. McKnight, of Owen Sound, President of the Ontario Association, read the President's address, as follows:

It affords me genuine pleasure to meet with you all in this our usual annual gathering—pleasure for more reasons than one. I am pleased to meet with our American friends, who have honored Canada, and honored Toronto by choosing this as the place of meeting of the National Association. True, it is a "National" Association, but the representation from Canada is usually so small, we had scarcely the right to expect, much less enjoy, the pleasure of having Canada chosen as the place of meeting. I am pleased, because our own Canadian Association has turned out in such force to welcome our American brethren.

I am also pleased and proud to have, what has always seemed to me one of the things I most desired, and I am sure I only speak the mind and express the feelings of all our Canadian brethren, when I say that they have long wished for a chance to welcome to Canada's shores the "Father of Bee-keepers," the great "Huber of America," our venerable friend and brother, Rev. L. L. Langstroth.

Last winter was an unusually severe one to bee-keepers, but it was severe (with few exceptions) only to those who did not take the proper precautions in preparing for winter, at least so it has been with Canadian bee-keepers. I venture the assertion that much more care will be taken this fall to prepare for the coming winter. The spring came upon us unusually cold and wet, and this state of affairs was prolonged until nearly the first of June. Had the season opened as the majority of seasons do, many colonies would have escaped and come through all safe, though then very weak, but the cold and backward season completed the work which the careless bee-keeper began, and these colonies became victims of "spring dwindling.” When the season came upon us, the majority were not ready to reap the harvest. The flow at first was only sufficient to supply material for a genuine “swarming fever,” and I opine that many allowed too great a number of swarms. Only last week I received a report from one bee-keeper who had one colony in the spring, but who has no less than 15—an increase of 14. While the other honey-bearing sources supplied a fair proportion of the flow, still, to Canadian thistles, Canadians are indebted for the great majority of the crop of 1883. Bokhara clover has also done well, and I am of the opinion that it will become one of the future staple honey plants of the country.

On the whole, our beloved pursuit is in a most prosperous and happy condition. During the past season giant strides have been made in apiculture, both in the improved method of manipulation, and in the advanced ideas with regard to placing the products of the hive in a pleasing and salable shape before the people.

We may ascribe the success and advancement so obtained, in part, to the able manner in which all the subjects which tend to this advancement are handled by able and energetic writers in the many journals which the public have the benefit of perusing at a small cost, and which are constantly disseminating useful knowledge on matters interesting to bee-keepers. Conventions, such as this, have much to do with its advancement, as it is at these meetings that we learn from each other what each one of us has been doing during the past year, and by thoroughly discussing the various thoughts and experiences which are advanced, we are enabled thereby to arrive at correct conclusions regarding many questions which have held doubtful prominence in our mind until substantiated by like experiences from others.

Honey shows are likewise a great item in giving apiculture a helping impetus. I feel that it is the duty of every bee-keeper to take his entire crop to these places, whether the prizes are large or not, and when once the bee-keepers make the “Honey Department” one of the leading attractions of the Fair, the Agricultural and other societies will not long lie dormant in the matter, but each will vie with the other in trying to see which will have the greatest attractions in our department.

I cannot close without mentioning the honored dead—of such men as Wagner, Quinby, Colvin, Grimm, and a host of others who have gone before us, and who have done so much for us. I must also refer regretfully to the death of one of our number in the person of Theodore Houck, who has since we last met together departed this life.

It will soon be the duty of this Association to select another of their number to fill the position which I have so poorly occupied during the past year, and I feel that they will have little difficulty in selecting some one who will do the honors of the position much more efficiently than I have been able to perform them.

Before closing I must again thank our American friends for their presence in Canada. I feel that this session will prove one of exceeding benefit to us all in reaping a harvest rich in valuable information, and I trust that it may long be remembered as such.

WHO SHOULD KEEP BEES ?

The following is the address of the Rev. W. F. Clarke on the above subject:

“Everybody,” was once the current answer. I have given it myself before now. Ten years ago, in my prize poem on “The Honey Bee,” I pictured

“Each household of an apiary possessed.”

It was the general idea then, that in a proper condition of society, a bee-hive out-of-doors would be considered as much a part of a well-regulated domestic establishment as a sewing machine in-doors. But we have got bravely over that, and many other crude notions that prevailed, even among bee-keepers themselves, ten years ago, and the time has now fully come for insisting upon it that only those should keep bees who are properly qualified to do so. That same law of division of labor which forbids every man being his own shoemaker, tailor, or blacksmith, prohibits every man from being his own honey-producer. Among the numerous topics of present and practical interest in the realm of apiculture, this deserves a prominent place, and it is especially fitting that it should come up at a gathering like the present. Every one of our annual meetings is followed by less or more abortive attempts at bee-keeping on the part of some who have attended and become inoculated with a desire to keep bees. There is always considerable enthusiasm awakened at these meetings, and it would be discreditable to us if there were not. Enthusiasm is contagious, and it is no wonder that people who know nothing of bee-keeping catch the infection, and go away determined, hit or miss, to start an apiary. It is more often a miss than a hit, and thus we become undesignedly the means of seducing our fellow-beings into disappointment. As a preventive of this, or at any rate as a check upon it, there should be some words spoken in plain English on these occasions in reply to the question, “Who should keep bees.”

There is another reason why it is as well to discuss this question here and now. It is about the only good opportunity we have of doing so. It is not a congenial topic for the bee journals. many of which are, more or less, mixed up with the supply business. Of course the more people who start bee-keeping, the greater will be the sale of supplies. We cannot blame those who are in this business for wanting to make all the money they honestly can at it. It is not the most remunerative business in the world, there are too many in it, and the competition is too keen for it to be very lucrative. So it is natural those who are in it should want to sell as many hives and “bee fixins” as they can. It is not their interest, perhaps it is not their duty to discourage beginners. But we have met, not as supply dealers, or with any personal or selfish ends in view. This is a grand apicultural parliament convened in the interest of bee-culture, and it is a part of our duty to do what we can to obviate whatever tends on the whole to the injury of bee-keeping. All will agree that it is not desirable for people to undertake what is sure to end in failure. Those who start at bee-keeping and make a botch of it are very apt to decry the whole thing as a humbug, a delusion, and a snare. No doubt the interests of bee-keeping, as a whole, have suffered from the maledictions of soreheads, who, if they had been wise, would have never touched a bee hive, except to throw it aside.

Bee-keeping may be justly regarded as having attained the status of a profession, or a business. In any correct view of it, it requires special natural qualifications, and a thorough education. The natural qualifications are not of much account without an education, obtained somehow or other, and the education is a downright impossibility without the natural qualifications.

I feel myself somewhat at a loss in giving a categorical answer to the question I have taken as a text. It reminds me of the discussions there used to be, and are still, as to what constitutes a call to the ministry? Volumes have been written on that subject, and I think it would be easy to write a volume on the question, “Who should keep bees?” without, perhaps, throwing much more light on the subject than has been done by some treatises on the other theme. Nevertheless there is such a thing as a call to the ministry, and there is also such a thing as a call to bee-keeping. Many have hit their heads against a pulpit in the mistaken idea that they have been called to be preachers, and just so many have blundered into bee-keeping, under the delusion that they had a call in that direction. Something will be gained if we can impress people with the conviction that it is not wise to follow mere impulse. There is less danger of their blundering if we can get them seriously to ponder the inquiry, “Am I cut out for a bee-keeper?”

In a general way it may be safely said that in order to succeed in this business or profession there must be an aptitude for it. What that is it may be difficult to state in detail, but I am fast coming to think that the true bee-keeper, like the true poet, is born, not made. The great Huber is an example in point. To use a theological phrase, he was predestinated to be a bee-keeper, and not even the loss of sight could prevent the fulfilment of his mission. His devoted wife and trusty man-servant were eyes to the blind apiarist, and with their help he took the foremost place among historical bee-keepers. A degree of that enthusiasm which inspired Huber must influence all who aspire to rank among his disciples. No man succeeds very much in any line of things which does not stir him with lively interest. But this alone is not enough. The true bee-keeper must have keen perceptions, and be at once of an observant and reflective turn of mind. He must be a modern Job for patience, and a modern Bruce for perseverance. No matter what his natural aptitudes may be, he will make serious mistakes at first, and needs to learn that, as Napoleon was wont to say, "He is not the best general who makes no mistakes, but he who repairs them as quickly and as thoroughly as possible." He must not be irrascible, for in that quality the bees are more than a match for the most irrascible of mortals. He must have perfect self-control, for if a man cannot control himself, he may rest assured that he cannot control the denizens of the bee-hive. He must be sanguine and hopeful, for he will see many dark days. His motto must be :—

> "Never give up ; it is wiser and better,
> Always to hope than once to despair."

He must have a mind for details, and regard nothing as trivial that has to do with the welfare of a colony or an apiary. "Unconsidered trifles" have often led to important discoveries, and astonishing results, and the man who is naturally prone to be negligent of apparently little things must either conquer that habit or come to the conclusion that he is not adapted to shine as a bee-keeper.

Lastly, at the risk of being laughed at by certain apiarists who can take bees to bed with them and sleep undisturbed, I shall venture to specify, a certain indifference to stings, which is characteristic of a few of the human family. There is no denying the fact that some people are highly sensative to the virus of the bee, while on others it has little or no effect. Some curious experiences have been had in this line, of which truly intelligent bee-keepers will take note. It has been a favorite idea with many that when you become accustomed to being stung by bees, you cease to mind it. I was of that opinion at one time myself. I had become hardened to the thing until I did not mind a bee-sting more than a pin-prick. But on a luckless day I got a sting from a furious Italian just on the middle tip of my upper lip, which resulted in several hours' intense agony and a week's sickness. Ever since then, a sting in any part of the body results in a renewal of those painful effects. The virus at once flies to the head, and causes the greatest distress. I am aware that in thus speaking I issue my own death warrant, as a bee-keeper, but I am at the same time stating facts which "nobody can deny." I am precluded from keeping bees except on a small scale, as an amateur, from purely scientific interest, and with the use of precautions in the way of gloves and veil, such as thicker-skinned and more hardened bee-keepers despise. But I lay it down as a maxim that unfortunate people who are keenly sensitive to the effects of stinging, had better give bee-keeping, as a business, "a good letting alone."

In addition to the natural aptitude which has been imperfectly sketched, an education in bee-keeping must be obtained. It matters little how this is done, provided it be thorough. Let no one rush into bee-keeping imperfectly equipped with knowledge on the subject. It is positively ridiculous to see how some people act in regard to this matter. They seem to suppose that they have only to get a few colonies of bees and they are completely set up in the business. Their next step is to invent a hive or some wonderful improvement that is to eclipse everything in the market. After a little spluttering and flourishing they give up in disgust what they ought never to have attempted.

It is no doubt possible for a tyro in bee-keeping to become self-educated in a sense. With the invaluable bee books and excellent bee journals that are available, the theory can easily be mastered. Then comes the practical part, and "aye, there's the rub." To manage bees with an eye to profit from honey production, is an attainment far beyond mere theory, however correct. I do not think this can be gained in any other way so quickly or so well as for the beginner to apprentice himself to some good practical bee-keeper, and happy is he who has the opportunity of so doing. I am inclined to believe that our best bee-keepers will have to start schools of apiculture, as indeed some have already done. It may be so arranged as to be an advantage to them as well as to their pupils. Besides these private schools, apiculture should be taught both in theory and practice in agricultural colleges. The Michigan Agricultual College has set a good example in this respect, which ought to be followed by every similar institution on the continent of North America. Bee-keeping has now reached such proportions that it ought not to be ignored at those educational establishments which are devoted to the development of rural industries. As a source of national revenue it takes rank with general farming, stock raising, dairying, and similar out-door pursuits. As a science, bee-keeping covers a large field of research, and as an art, requires instruction quite as extensive as some other rural industries. This meeting will only be acting in harmony with its design and legitimate functions in making a strong deliverance on this subject. Bee-keeping has quite long enough been left to chance and hap-hazard. It becomes those who are familiar with its wants and possibilities to exalt it to a proper position beside other occupations, and to demand for it suitable educational facilities.

What I have said is intended to be introductory to an earnest and thorough discussion of the whole matter, and if it secures this my object will be secured.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

Northwestern Convention.

The Northwestern Bee-Keepers' Association will hold its fourth annual convention at Owsley's Hall, N. W. corner Roby and West Madison Sts., Chicago, Ill., on Wednesday and Thursday, October 17 and 18, 1883, commencing at 10 a. m. on Wednesday and holding five sessions.

The Rev. L. L. Langstroth (the father of American apiclulture) has promised to be present, and many of the most prominent apiarists of the Northwest will be there and aid in the deliberations and discussions.

This meeting will be held during the last week of the Inter-State Industrial Exposition, and reduced railroad fares may be had on nearly all the railroads. A cordial invitation is extended to bee-keepers every where to attend this annual reunion.

Meals may be obtained at the Restaurant near the Hall at 25 cts. each.

Beds may be secured at the Gault House for $1, or at other Hotels at regular rates.

THOS. G. NEWMAN, *Sec.*
C. C. MILLER, *Pres.*

☞ The sixth annual meeting of the Northern Michigan Bee-Keepers' Association will be held at Stone's Opera Hall, Sheridan, Montcalm county, Mich., on Tuesday and Wednesday, Oct. 9 and 10, to open at 10 a. m. of the first day. Evening sessions will be held, which will be interesting. At our last meeting it was requested that all interested in apiculture attend, and all who would, and could, furnish for exhibition apiarian supplies in the way of hives, extractors, implements used in the apiary, honey, honey-producing plants, and anything that would be interesting to a bee-keeper. Ample arrangements have been made to entertain all who will come. Let us have a general turn out, and see what we can learn one of the other. It will be a dull scholar who cannot profit by such a gathering. Feel assured we shall have an interesting time.

GEO. W. STANTON, *Pres.*
O. R. GOODNO, *Sec.*

☞ The Iowa Central Bee-Keepers' Association will hold its regular annual meeting on Friday, Nov. 2, 1883, at the Court House, in Winterset, Madison county, Iowa. All bee-keepers are cordially invited to attend, and let us have one of the best meetings we have ever held in the State.

J. E. PRYOR, *Sec.*
Arbor Hill, Iowa.

☞ Please announce that the Iowa Central Association, will meet at Winterset, Iowa, Nov. 2, 1883.

Z. G. COOLEY, *Sec. pro tem.*

Bee Battles and Robbing.

Mr. A. Pettigrew gives the following on the above subject in the London *Journal of Horticulture:*

Thieving scouts and skirmishing parties are common in all apiaries, and hard-fought battles are occasionally seen there, and plunder is the object. Robbing bees are watchful and crafty in attempting to enter hives not their own, and experienced bee-masters know them by their conduct. In watching for an opportunity to enter hives unobserved, they fly differently from bees engaged at honest work, and may be seen "standing on wing" in front of and close to the doors of hives they wish to enter, and if their attempts to enter be not resisted and thwarted they speedily accomplish their aims and carry home the honey. As soon as they gain access to it they convey to their own community the idea that a hive has been entered and honey may be had. The way in which the intelligence is conveyed is beyond our knowledge; all we here notice is the fact. The thieves of London know what "a cracked shell" means (a house broken into), and bees know what is meant by a hive undefended; and with marvellous rapidity the unresisting bees lose all their treasures.

Fortunately robbers are generally prevented from entering hives on their first attempt to do so. It may safely be asserted that in every hundred attempts to enter hives for plunder, ninety-nine are failures. When hives are weak their doors are often not well guarded, and robbers enter, and sometimes the robbers kill the whole of the small force of defenders. Strong hives, during a glut of honey, are sometimes off their guard, and let their hives be invaded, and if the robber bees are permitted to go in and out without hindrance for a short time they, generally speaking, take all the honey. Successful robberies of strong hives are not common. The robbers are generally discovered before they have done much harm—before they have lost the smell of strangers and foreigners, and when the discovery is made the bees of the invaded hive muster in strength to resist the invasion and make a determined stand against it. As some of the robbers have tasted the honey and carried off some booty, they are determined to have more, and are difficult to beat back. In their efforts to enter, the attacking force seems to increase in numbers and energy, and while hundreds of them are hurled back and off the flight-boards, hundreds more take their places, and courageously and persistently continue the attempt to take the place by storm. A well-fought bee battle is most interesting. If the door of the hive be rather small, and the robbers successfully resisted for a while (none allowed to enter), they give up the contest and retreat.

When a hive is attacked by robbers all the bee master can do is to contract the door, and thus make it more easy for the bees to defend it. If he sees the robbers are resisted and repelled, he may know that they are so far unsuccessful, and if he find that robbers have gained access to a hive and are engaged in carrying off its honey without resistance, he should know that it can be saved by removal only to a distance of a mile or two for a time. If the robbing bees belong to the same apiary as those that are being robbed, the suggested manœuvre of Quinby may be tried. His plan is simply to exchange the positions of the hives by putting the robbers on the stand of the hive they steal from, and *vice versa*, and thus confound the robbers. My opinion is, that bees are too clever to be outwitted by this. Our plan is to remove one of the hives to a distance of one or two miles.

Honey and Bee Show at Hancock, Co., Indiana, Fair.

The Indiana *Farmer* gives the following report of the above:

As per-previous notice the regular monthly meeting of the Hancock County Bee-Keepers' Society, in connection with brother bee-keepers from adjoining counties was turned into a regular fair for the benefit of all interested. There was a good display of all the appliances necessary to modern bee-culture, besides a good showing of the products of the apiary for the present season.

The President of the society, Mr. Alonzo Tyner, exhibited an extractor, hive, section boxes, frames of wired foundation fully drawn out, a nice lot of honey, both comb and extracted, also a jar of preserves made with honey, which were very fine.

Dr. S. S. Boots showed a hive, extracted honey, and vinegar made from honey.

J. W. Jones brought in one of the old style of hives, also a chaff hive made by W. T. Falkoner, of Jamestown, N. Y., and a sample of foundation from J. Van Dusen & Sons, of Sprout Brook, N. Y.

J. T. Coffin exhibited a fine lot of honey in several shapes best suited to the trade.

The best showing was made by Mr. N. D. Coffin, who had on exhibition honey, both comb and extracted, vinegar, wired foundation in the several stages of being drawn out, and all the necessary tools for use in the apiary, besides a complete selection of all the producing plants native to this part of the country.

Mr. Geo. Cole, of Shelby county, showed some very nice queens in cages.

The regular meeting of the county society was opened and closed in a very short time to give all present a chance to talk and examine into the merits and conveniences of the articles on exhibition. The meeting was a very enjoyable gathering of bee-keepers, and all seemed pleased at the result.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

☞ The fall meeting of the New Jersey and Eastern Bee-Keepers' Association will be held in the city of New York, at the Cooper Union, on Wednesday, Nov. 7, 1883.

J. Hasbrouck, *Sec.*
Bound Brook, N. J.

☞ The Bee-Keepers' Association of Central Illinois will hold its next meeting on Wednesday, Oct. 10, at 10 a. m., at 205 South Main street, city of Bloomington. All interested, in this and adjoining counties, are invited to attend.

J. L. Wolcott, *Pres.*
James Poindexter, *Sec.*

Honey and Beeswax Market.

Office of American Bee Journal,
Monday, 10 a. m., Oct. 1, 1883.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—The demand for extracted honey is exceedingly dull; for comb honey, only fair; arrivals are plentiful. Stocks are large in the hands of corn merchants and others. Our own supply is larger than ever, and, for the present, we cannot compete with commission merchants. We may have to offer lower figures. Our prices so far were 7@9c. for extracted, and 14@16c. for comb honey on arrival.

BEESWAX—Arrivals of beeswax are good at 25@28c., and the demand is fair.

Chas. F. Muth.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 18c. Dark and second quality, 14c.; extracted white clover in kegs and barrels, 11c.; dark, 8c.

BEESWAX—Prime yellow, 30@31c.

H. K. & F. B. Thurber & Co.

CHICAGO.

HONEY—Comb honey has sold freely for the past two weeks, and stocks are at present low. 1 lb. sections of white comb are bringing 18c.; 1½ to 2 lb. sections of same quality, 16@17c.; various sized sections of white comb, 15@16c. Extracted honey is selling faster, and prices are ranging from 8@10 cts. per pound, according to body and flavor.

BEESWAX—Yellow, 32@33c.; dark, 25c.; medium, 30c.

R. A. Burnett, 161 South Water St.

SAN FRANCISCO.

HONEY—There is a fair jobbing trade. Offerings are not large. Choice qualities command extreme figures. White to extra white comb, 16@20c.; dark to good, 10@13½c.; Extracted, choice to extra white, 8@9½c.; dark and candied, 6½@7¼c.

BEESWAX—Wholesale, 27@28c.

Stearns & Smith, 423 Front Street.

ST. LOUIS.

HONEY — Quiet. Salable at appended figures, but generally held higher. Strained and extracted at 6¼@7c.; comb at 14c.

BEESWAX—Ready salable at 26c. for prime.

W. T. Anderson & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—Comes very slowly and sells as fast as it comes at 18@19c. for best white in 1 lb. sections, and 17@18c. for 2 lb. sections. Second quality is very slow. Extracted usually sells very slowly in our market; as yet, no extracted has been received.

BEESWAX—None in Market.

A. C. Kendel, 115 Ontario Street.

BOSTON.

HONEY—We quote our market at 18@20c. for 1 lb. white clover; 18@19c. for 2 lb. white clover. Extracted is in good supply, and selling from 9@10c.

BEESWAX—Our supply is gone; we have none to quote.

Blake & Ripley, 57 Chatham Street.

CORRESPONDENCE

For the American Bee Journal.

The Development of the Standard Langstroth Hive and Frame.

L. L. LANGSTROTH.

This form of hive was the result of many experiments. In the spring of 1852, as early as the weather would allow the bees to be shaken from the combs of my bar hives, (18⅛x18⅛ and only 6 inches deep) uprights and bottoms were nailed to these bars, so that in a few minutes they became movable frame hives. In the latitude of Philadelphia, at least, I never knew good colonies to increase faster, if as fast, than in such shallow hives.[*]

Not to speak of hives 13x13,x13 whose cubic contents were about the same with the standard Langstroth, and of other discarded sizes, I made, in 1854, hives 12x12x36, with frames now called "Gallup frames." The surplus honey was taken in boxes or frames in the rear of the main breeding apartment. They had movable tops as well as movable sides. The side doors, being chamfered on their edges, in opposite directions, could always be easily opened, and being suspended like frames, by top bars upon the frame rabbets, the size of the hive could be changed at will. Two such hives were placed, Dizerzon fashion, side by side—with entrances in different directions—crosswise on these, two more were placed similarly, and the pile continued, in the same fashion, as high as could be conveniently reached for manipulation—the whole colony having a common movable roof. Although my judgment was against such an arrangement, I could not rest satisfied until I had given this system a fair trial, and proved, by actual experience, that the necessary manipulations were so tedious, as greatly to out-weigh the advantages promised by such a compact arrangement. However it may be with our German friends; with us, economy of *time* is of vastly more importance than economy of *space*. I, therefore, took down the stack, and used the hives as top as well as side openers, until I left New England. I also used frames even larger than the Quinby size, but found them objectionable, because of the weight of the combs when full of honey.

These facts are sufficient to show, that the standard Langstroth hive was not the result of mere theoretical notions, or of traditional prejudices, nor did it come, by what some would call, a chance "happy go lucky" hit. Born out of many experiences, it was deliberately adopted, with the knowledge that at that time the great majority of our best bee-keepers did not approve of such "low flat things." So deep was my conviction that its shape was better than the approved forms, that I could not consent to recommend any other.[†]

Although the chief reasons for the shallow form have been often given, it may be well, in this connection, very briefly to repeat them. Those who wish to see the subject more fully discussed, are referred especially to the old volumes of the AMERICAN BEE JOURNAL, where they will find the merits and demerits of the standard Langstroth hive very thoroughly canvassed.[‡]

My tenacious adherence to the Langstroth form, led some to imagine, that perhaps in some way or other, the validity of my patent might depend on this shape. This reminds me of a once noted writer on bees, who while warning persons against infringing upon his patent (although he had never taken out any patent), closes thus: "Even an external imitation of my hive will not be suffered to pass with impunity!"

The broad and low shape which I introduced, in addition to giving the much-desired top surface for surplus honey receptacles, has the following advantages:

1. It is obviously much better adapted to the use of upper stories, than taller hives. It seems more natural to bees to place their stores *over* their central brood-nest, than any where else. When extracting unsealed honey, I kept neither honey board nor any thing else over the tops of the frames to interfere with handling the frames, as soon as the roof over them was removed. A glance at the tops of the frames was enough, with Italian bees, to show if extracting was needed, for they would begin to extend their comb-building upwards, even if they had plenty of room for this work on empty side frames. Now, why should bees attempt the difficult work of upward comb building, against the law of gravity, by which their suspended combs are kept in a perpendicular position, while they have ample side room for building them in the natural way? Why, I say, do they act thus, unless it is most in accordance with their instincts to place their stores above their brood-nest?

If honey, to have its choicest flavor, ought not to be extracted—as the Dadants and other of our leading apiarians assert[‖]— before it has been capped, and if when all bee-work is most pressing, more colonies can be taken care of by piling hive upon hive, filled with empty combs—to be emptied when more leisure comes—then the advantages of shallow hives are easy to be seen.

2. If we do not make the number of frames so small, that to get the requisite comb surface, they must be too heavy for easy handling, then for cheapness and other obvious reasons, the fewer frames the better. For this reason, if there were no others, frames of the Gallup size seem to me objectionable.

3. Long and shallow frames are more convenient for most of our necessary manipulations.

(*a*.) In handling them the arms take a natural and easy, instead of a cramped position.

(*b*.) With such frames the eye commands the whole surface of a comb, in searching for the queen, etc., without that uncomfortable craning of the neck which deep frames compel.

(*c*.) As has been already explained, there is less danger of hurting bees in removing or replacing the shallow frames.

(*d*.) Less motion, and of course less time, is needed to take out or put back such frames.

(*e*.) It is very much easier to make such frames hang true, then deep ones. If their hives had glass on their backs, many who use deep frames would be surprised to see how much "out of true" they often are.

Whatever may be the case with bee-keepers, in a small way only, those who are manipulating for hours together, in large apiaries, and to whom in the press of work, time saved means more money, than in any other season of the year, will find the above reasons for giving the preference to the long and shallow frame, worthy of careful consideration. They are submitted, however, in no spirit of dogmatism, and I am far from claiming that the standard Langstroth is *demonstrably* the best under all conditions, and for all parts of our widely extended country. The time will probably never come, when uniformity will be as much insisted on as in the standard weights and measures of the same country. If by a simple volition, I could, without pecuniary loss to any one, or violence to any one's feelings or prejudices, change every movable comb hive in America, into the standard Langstroth size, I would will no such change. Let the Dadants, Hetheringtons, and others, have full scope for testing on the largest scale their different forms, only let there be, as far as possible, *uniformity in each style*, so that any purchaser will know precisely what size, under a given name of hive, he is getting. I am sure that Mr. Root, and others, will be willing, when requested, to make hives of the standard Langstroth size—and if Mr. Root will call his size of frame the *Simplicity Langstroth frame*, there will in the future be plain sailing, at least before all who use the shallow Langstroth frame.

Oxford, Ohio, September, 1883.

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[*] Bingham, Marvin and others prefer hives about six inches deep.

[†] In latitudes where bees can be either safely wintered in the open air, or in proper in-door depositories, a still shallower form of hive may, perhaps, be found preferable.

[‡] Of all editors whom I ever known Mr. Samuel Wagner was the most judicial, in his attitude on all matters pertaining to bee-culture. *Fair play* was to him a precious jewel indeed.

[‖] I use the word apiarian both as adjective and substantive, without the authority of Webster or Worcester, because it sounds much better than apiculturist, and is repeatedly so used by Dr. Edward Beaen in his work on the honey-bee—than whom there is no writer on bee-culture who is higher authority among English-speaking people.

Read at the Maine State Convention.

How to Make Bee-Keeping Profitable

ISAAC HUTCHINGS.

To make bee-keeping profitable we should keep the best strains of Italian bees in preference to the black or German bees. Some of the new races of bees may prove equal or superior to the Italians, but they have not been sufficiently tested to warrant a change. The dollar queen traffic, if rightly managed, will be a blessing to the intelligent apiarists, as it will open a market for the small and inferior queens that might otherwise find their way into the class of tested queens. I believe that bees winter better and build up quicker in the spring where they are well packed with chaff or dry sawdust on their summer stands, than they do when wintered in a cellar. Spring dwindling, I believe in most cases, is a result of cellar wintering. Those who winter in a cellar use a single-walled hive, and when they put them out in the spring the sun will warm them so that many will fly out when the air is so cold that they become chilled and never return. If we have a few days of warm weather, and they have all the brood that they can care for, one cold night will drive the bees into a cluster and leave the brood to die. The bee hive needs protection from the rays of the sun, and the cold storms and winds of early spring, as much as it does in the winter months when there is no brood to chill. We should encourage breeding early in the spring, remembering that it is the early bees that store the surplus honey.

The old box hive is a thing of the past with all progressive bee-keepers. A movable comb hive is indispensable to profitable bee-keeping. As soon as the weather will admit in the spring, we should examine each colony so that we may know if they are in need of any of our aid. No. 1 may have lost their queen; No, 2 may be short of stores; No. 3 may be weak in numbers and need a frame of ripe brood. It would be very difficult to ascertain the wants of a colony in a box hive without movable comb frames. I should be very sorry to have a colony die for want of food or care after they had survived our cold winter.

If our bees are well wintered and well cared for in the spring, they will be ready to divide or swarm before the white clover honey harvest. If we divide it should be done at least ten days before the honey flow commences, and the honey sections should be put on soon after, so that the bees may get settled down to business in season to give us good returns. In dividing, leave each colony as strong as it will do, and not induce swarming.

Comb honey should be put up in neat and attractive packages, and we should not destroy the market by forcing too early sales. Some sold their honey for 20 cents per pound last August, and if they kept it until October it would have sold quick for 25 cents per pound. To make bee-keeping profitable we must have a love for the business, and if we do not love the business end of the bee, we should learn not to fear it. We must become acquainted with the natural laws governing the honey bees. A "Manual of the Apiary" will be found in the library of every progressive bee-keeper. We have made great improvements in bee-culture within the last decade, and many more are needed and are continually being made, and unless we subscribe for and read a good live bee journal, we shall be left behind. I frequently find a single article in my bee journal that is worth more to me than the price of a year's subscription.

Nothing is better calculated to mislead us than the idea that bee-culture has acquired perfection, and that we know it all. It is true that Americans lead the world in this art, but it is in its infancy, and who can tell what the coming bee will be like? We should keep a register of the apiary, so that at a mere glance we can ascertain the age, race, strain and quality of the queen of any colony, determine the character of her progeny, the amount of honey stored and the increase. By having a history of each colony before us, we can avoid many mistakes that will occur, if we depend upon a treacherous memory. We should have everything needed in the apiary on hand and ready for use at the commencement of the season, and we should give our bees all needful care, and supply their wants at the proper time. There should be no putting off until to-morrow what should be done today.

For the American Bee Journal.

Freaks of Queens, Observed by Me.

ROBERT CORBETT.

I would like to mention, through the BEE JOURNAL, the freaks of queens that have come under my observation.

In July, 1882, I opened a hive to introduce a queen in the old way, in a wire cage on the face of the comb; in the opperation she got away, and flew out of my sight. Three days later I opened the hive to put in another, and there, to my surprise, I found my queen at her daily work, depositing eggs as majestically as if she had been there for months.

A swarm came out of a hive on the 18th inst., that I had re-queened last August; the queen was very prolific, keeping the hive well filled with brood; ten days after hiving, I opened the hive to see how she prospered, and to my astonishment not an egg was to be seen; now, how is this, I would ask, that she is not laying, if the old queen leads the swarm?

Fifteen days ago I had some nucleus hives, with virgin queens, for fertilization, and when about 5 or 6 days old, we had 2 or 3 very windy days, from the 25th to the 28th; at the cessation of the wind, I examined my nuclei, and found I had lost 2, and on the first of September I had a hive (No. 22) that threw out a swarm; 3 or 4 days later I examined hive No. 22, to take out the queen-cells and give it a laying queen. Frame after frame was lifted out, and there was not a queen-cell nor the appearance of one in the hive, but a nice yellow queen was there; how is this, did not one of my lost queens find her way in there, and, being protected by workers, therefore forced a swarm? that is all the way that I can account for it.

On Friday of last week, I was called upon to help Mr. E. Kimble to extract some honey, with the assistance of Mr. Solomon Whitney, and during the opperation of manipulation, in one colony that had swarmed a week previous, several queen-cells appeared, as the queen left them, but one that was not open, being larger than usual, our curiosity led us to open, and what did we find, but two queens in one cell; one was quite as large as usual, while the other was not quite so large, but of fair size; other cells being hatched first, the bees had pierced this one, therefore they were dead; is that not something new to the bee men of the age?

Manhattan, Kansas, Sept. 10, 1883.

For the American Bee Journal.

Michigan State Fair, Bee and Honey Show.

W. Z. HUTCHINSON.

The interesting, magnificent, unapproachable Bee and Honey Show of the Michigan State Fair, which closed yesterday, was a brilliant success in the highest sense of the word. Such a large and interesting show has never before been made at a State Fair, and one gentleman who has visited the bee and honey shows of Europe, pronounced it finer and larger than those of the old country.

Very much of the success of the show is due to Mr. H. D. Cutting, who has labored for years to have the Agricultural Society recognize bee-keeping as an industry, and at last it has been recognized—the officers are very much interested, and will do almost anything in reason that we may ask of them.

To go on and describe, in detail, all the exhibits, would take too much space, hence I will speak in a general way.

H. D. Cutting, of Clinton, Mich., showed the largest exhibit of implements and bee-keeping literature. He had over 60 varieties of implements, and 50 specimen copies of periodicals and publications.

E. T. Lewis & Co., Toledo, Ohio, exhibited implements, and received first premiums on honey extractors and wax extractor. They also exhibited a mammoth smoker, 2 feet in height. There was a whistle in its mouth, and an organ at the back of the bellows, and was warranted to play six tunes. The instructions on the back were: "Take me out to see your hybrids." Many was the laugh raised by this smoker.

James Fry, Leslie, Mich., made a display of fancy cases filled with comb honey, one colony of bees, and a pyramid of wax.

August Koeppen, Flint, Mich., had on exhibition a mammoth extractor capable of receiving six combs, or, if only three combs were used, an automatic arrangement can be brought into requisition, and the combs turned by a simple touch of the finger. He also had a hive, the walls and bottom board of which were stuffed with tow.

C. M. Weed, of the Agricultural College, Lansing, Mich., made a magnificent display of honey-producing plants pressed and mounted. There were more than 50 varieties, and so well was the work done that the natural colors were entirely preserved.

W. O. Burk, Crystal, Mich., had on exhibition a complicated hive called the "queen home winter protector," and, strange as it may seem, it received the first premium.

The exhibit that had the most "shine" and "show" and glitter" was that made by M. H. Hunt, Belle Branch, Mich. This exhibit occupied one-fourth of the building, and consisted of hives, extractors, comb foundation machine, and other apiarian implements. His honey was put up in almost every conceivable shape, in glass jars, glass pails, glass bottles, tin pails, tin cans, all labeled with showy labels, and arranged in rows and piled in pyramids; one pyramid, arranged upon a large stand of circular shelves, was especially fine. The comb was built in fancy sections of wood, glass and mica; some with openings in the centre for placing bouquets. His three pyramids of wax were molded in very fancy shapes, and surmounted with flowers. He also had 2 colonies of bees out-of-doors.

Your humble servant (W. Z. Hutchinson) also occupied one-fourth of the building, and made the largest and finest display of comb honey, which was piled up in the shape of a pyramid until it actually reached the roof. The base of the pyramid was 20 feet. He also received the first premiums on the specimen of 10 pounds or more of comb honey; this specimen being arranged under a glass case, which was lettered in gilt letters, "Gilt Edge Honey." He also exhibited 3 colonies of bees in an observatory hive, so arranged that visitors could place their noses right against the glass, and this part of the exhibit was surrounded by a crowd from morning till night. His pyramid of wax was surmounted by an old-fashioned straw hive formed of wax. It received the first premium. His exhibit of pressed honey-producing plants were bound in an Emerson binder, and placed where the crowd could examine it, and I guess he will have to make a new collection. He received premiums to the amount of about $80. Mr. Hunt's premiums "figured up" to somewhere between $50 and $60; Mr. Cutting's to $33; other exhibitors received from $2 to $8.

The city papers gave up excellent notices, and spoke of it as a "new and novel feature." The Governor gave us a call, and was introduced to the exhibitors. The public said, "Why, this is the most interesting thing I have seen."

Rogersville, Mich., Sept. 23, 1883.

Grange Bulletin.

Beeswax and its Production.

J. M. HICKS.

Wax is a vegetable product deriving its origin from the saccarine principles existing abundantly in the products of nature. It is found upon the surface of the leaves of many trees in the form of varnish, and possessing all the qualities of beeswax. The wax bearing myrtle (*Myrieau Ceriferi*) a shrub which grows abundantly in Louisiana and other parts of the United States, produces wax in large quantities; and there are also in many parts of the East and West India Islands shrubs that produce wax in great abundance. The myrtle bears a small berry, of which wax forms its outer coating, and when exposed to a flame burns with an agreeable aromatic odor.

Dr. Darwin supposes that the design of the waxen varnish which covers the flowers is "to glaze over the fecundating dust of the anthers and prevent its premature explosion from excess of moisture, and ascribes to an unseasonable diffusion of anther dust, the failure of orchard and corn crops in summers of extreme humidity. The quantity of wax found in this form is small compared with that which is produced by the honey bee, and also of inferior quality. When pure it is of a whitish color and destitute of taste, with scarcely any smell; it grows brown and even black with age. After manipulation it has an aromatic smell, which, however, disappears on exposure to the atmosphere. The dust of flowers, called pollen or farina, was long supposed to be the element of wax, and it is a curious instance of the tardy progress of the knowledge of natural history, that though the mode in which wax is produced by the bees was ascertained beyond all doubt by Huber over 60 years ago, this fact is yet but little known, and farina continues to have the credit of being what is called "crude wax." Buffon was of this opinion, and, in an edition of his work published as late as 1821, no notice is taken of the recent discoveries on the subject, which prove his opinions to be erroneous. Reaumer was inclined to believe that pollen, by receiving some peculiar elaboration from the bees, was converted, in the stomach, to real wax, and disgorged under the appearance of paste. Later observers, however, denied that wax was disgorged by the mouth; they affirmed that it exuded from the rings of the abdomen in the form of small scales, and that pollen was used for very different purposes. That this last mentioned substance is not the prime constitutent of wax, was a conclusion drawn by repeated and accurate observations by our most celebrated apiarists.

It has been observed, for instance, that pollen is carried into the hives in great abundance, that were already filled with comb; that it is often of various shades, while new combs are always of pure white; that new swarms for a few days carry in no pollen, although their first work to be done after being hived, is the building of new combs, which progresses with unremitting rapidity; and while it has been stated that 100 pounds of pollen have been carried into a hive during one season, the whole weight of the comb in the hive, when separated from the honey and farina, weighs something less than 2 pounds.

Huber lodged a young swarm in a straw hive, furnished them with honey and water, and after five days confinement he perceived that they had consumed the whole of their provisions, and had constructed several combs of beautiful wax. These combs were removed and more honey given them, and the result was the same. This removal was made five times successfully, and on each occasion being supplied exclusively with honey, they produced new comb, thus putting it beyond dispute that this substance effected the secretion of wax in the body of the bee.

And, further, to ascertain whether the saccarine principle was the real source of wax, he supplied the captive bees with sugar in the form of syrup, and the result was still the same, wax was produced, and that in a shorter and in greater abundance than from honey, as the reverse of this experiment would prove whether pollen had the same property, instead of supplying the bees with honey or sugar, he fed them only on fruit or farina. They were kept captives eight days under a glass bell, with comb having only farina in the cells; yet they neither made wax nor were there any scales of wax on their abdomen, as was the case when honey and sugar were used.

It is but justice to the Scotch bee master, Bonner, to remark that amidst the errors that prevailed on this subject during his day, he had a strong impression of the real source of wax and the manner of its secretion. In this, as in other parts of bee science, his natural acuteness and shrewdness of observation led him to the very verge of some of the most important of those facts in the natural history of bees which we owe to the more scientific researches of Huber. "I have sometimes," says he, "been inclined to think that wax might be an excrescent exudation, or production from the abdomen of the bee, and that the queen can lay eggs whenever she pleases; so, if required, the worker bees can produce wax from the substance of their own bodies."

If this conjecture be right, it will follow of course that all the food which a bee takes contributes to the formation of wax in the same manner as all the food a cow eats contributes to the nourishment of her body and the production of milk; (bees consume much more honey or sugar when wax is required,) or to adopt a nearer simile from the insect tribe, as all the food a spider takes contributes not only to the nourishment of the animal, but to the production of the substance of the web from its body.

Numberless other analogies in nature might be cited in proof of the probability of this theory. The silk, for instance, produced from the body of the silkworm, is a substance as different from that of the animal itself, or the mulberry leaf it feeds upon, as wax is from that of the body of the bee, or of the honey or flower she sucks. And the exudations in the human ear which goes by the name of wax, is certainly as different from the substance of the body which produces it, as either the one or the other.

Upon the whole, until we meet with a more probable theory supported by facts, we must give it as our humble opinion that wax is produced only in one way, and in all cases upon the abdomen of the bee in very minute scales, and that wax cannot be produced unless the bee feeds upon honey or sugar, or what honey and sugar is produced from, and that bees do not produce wax continually, but only at such times as comb is needed in the storing up of honey. At such times bees consume a much greater amount of food than when there is no need of comb.

We here desire to give the analysis of beeswax, but time and space will not permit, trusting as we do, that some of our readers at least will become more or less interested in the science of apiculture, and still extend their research by procuring more elaborate works on the subject, and in this way which, if possible, become more interested in this, one of the most beautiful sciences.

For the American Bee Journal.

Wintering—the Pollen Theory.

DR. O. L. TINKER.

Evidently, Mr. Heddon, judging from his reply to my article, does not have a very clear idea of what the "humidity theory" is. Mr. S. Corneil, on page 728 of the BEE JOURNAL of 1882, gave the first well-defined views on this subject, and to this article Mr. H. is respectfully referred. Other articles on the subject will be found in the present volume on pages 7, 165 and 199.

Heat is a very important element in the successful wintering of bees, and it is one, moreover, that my generous opponent has apparently lost sight of completely. He gives several examples that are grimly supposed to annihilate the humidity theory The first is, where bees have been taken from cellars, "drenched with dampness" but in good health. In the same connection, Mr. Balch is quoted as saying "that all upward ventilation was death, that dampness was good for bees, and that he wintered with great success." All of which may be true, and yet fully accounted for by the humidity theory. For it seems that it does not matter how damp the hive may be, or the air outside, if there is good ventilation, and the conditions are such that the *normal heat of the cluster* can be maintained, no harm can arise from the presence of dampness or moldy combs. Mr. Corneil, nor myself, would undertake to contend that dampness is injurious to a colony of bees except under conditions in which the heat of the cluster could not be maintained, owing to the presence of unusual cold and dampness. The theory is "that cold and dampness are the primary causes of bee dysentery." Mr. Balch named conditions that would tend strongly to retain the heat of the colony, a vital point upon which he was justly very emphatic. And again, his bees had undoubtedly good lower ventilation.

But Mr. H. finds a "misfit" for the theory in the fact that he lost 48 colonies all in a few weeks after placing them in a very "dry cellar." And yet he would undertake to dismount me if I should get on his bacteria hobby (that is, if there should be found "any strength" in it),and claim it as his own! I am not sure but Mr. H. has got this double hobby horse for a sly purpose—if one gets lame he can "get on to'ther," and when that one gets lame he can get back again! Verily, if there was a show for his bacteria hobby any where, it would be in just such a case as the losing of 48 colonies all within a few weeks after going into winter quarters. But the humidity theory will account for the loss, if there was insufficient ventilation. I fear that there are yet many bee-keepers who are still undecided that bees need a great amount of winter ventilation.

O no, Mr. H., do not think that any one will try to get the honor of fathering the pollen theory away from you. You have a sure thing on that. But I am at a great loss to understand how "the bacteria theory is much the same thing." I can readily understand how a circus performer can ride two horses at once, but did not know before that we had a bee-keeper who could perform this interesting equestrian feat. Your logic on this point is too profound for me.

Now it was just possible that I was "mistaken" in regard to those hybrids. All hybrids have queer habits. They may have got up some dark night, walked out, evacuated, and returned without my knowing it. Certainly, Mr. H., but I was not mistaken in regard to my way of ajusting sections. It is true that I have delayed my report on the use of small sections so long that it is not surprising that you should have thought my experiments a failure. I promised to to make the idea advanced last winter a success, and it is accomplished quite beyond my expectations. In this place, I will simply thank Mr. H. for his derisive allusion to "the man who sets his sections down on the brood frames" with the suggestion that he has stumbled upon a boomerang that will recoil soon enough.

I am glad to learn that Mr. Heddon will test the pollen theory on a large scale the coming winter. He will find, however, that no little narrow hive like his, can be made to winter bees successfully on the summer stand without more "fixing" than can ever be made to pay. Not only this, but his hive has not enough surface on the top, nor enough space in the cases, as illustrated a year ago, for safe wintering. The surplus department of a hive on the summer stand in winter should contain not less than 4,000 cubic inches of space. I am, therefore, not surprised that Mr. Heddon has poor success in wintering. He would succeed better with the standard Langstroth hive.

In conclusion, I would like to ask by what slip of the pen Mr. H. came to predict that "disease will get me before old age." Of course, that must be a "mistake," or else, "In wondering mazes last," my friend has turned Prophet!

New Philadelphia, Ohio.

Penobscot County, Me., Convention.

The Penobscot County, Me., Bee-Keepers' Association met according to adjournment at Burrell Hall, Corinna, Sept. 6, at 10 a. m., with President Judkins in the chair. There was a fair attendance of members.

After the usual business of the association was attended to, the subject of the relations which the county associations should hold to the State associations was brought up, and all were united that some action should be taken by the State Association to bring us all into working order, as one society, and the following resolution was offered and accepted:

Resolved, That the Maine Bee-Keepers' Association needs, and should have the support of every county association in the State; and that the Penobscot County Bee-Keepers' Association extend to it, its most loyal support.

The afternoon session was opened by a spirited discussion of the following questions: 1, How to control swarming; 2. Is it advisable to clip queens' wings; 3. How to feed in the spring, is it advisable? 4. How to make bees swarm; 5. The different races of bees, their qualities compared; 6. The best method of Italianizing; 7. The best method of wintering, the proper temperature for cellars. These and other questions kept the time well occupied until night, and a good interest was shown. The general opinion was that the day had been well spent. Thirteen members signed the roll book, showing that old Penobscot has not forgotten that she has had the honor of instituting the first bee-keepers' association in the State—the Maine Bee-Keepers' Association being formed there—and that she means to be ahead as a county association. The next meeting will be held at East Corinth, Thursday, Nov. 1, at 10 a. m.—*Home Farm.*

☞ Articles for publication must be written on a separate piece of paper from items of business.

For the American Bee Journal.

The Northwestern Convention.

JAMES HEDDON.

Some way or other I have got the the idea into my head that the above named convention is going to lead all other bee associations in the world. Why? First, because, as Mr. Clarke so ably puts it, "it is conceded that this continent now leads the world in apicultural progress;" secondly, no where is this "progress" on such swift-winged pinions as in the West. Especially is this true of that portion of the West easily accessible to that great centre of commerce and science,—Chicago.

The rates during this meeting are about one-third the usual, on nearly all railroads. No equally good meeting can be gotten up with so little effort and cost as a Northwestern. Father Langstroth is to be at our next Oct. 17 and 18 meeting. Let us greet the faces of hundreds of the "get there" honey-producers of the country, from East, West, North and South, and let us see if we cannot all go away feeling and knowing that we have not only had a good time, made the acquaintance of the veteran Huber of apiculture, but we have learned points regarding this calling that will many times pay us for the cost and trouble of the attendance, and leave us the fun and frolic more clear gain.

I imagine I hear the response now echoing all over the country, "Yes, we'll be dar, suah as your boun."

Dowagiac, Mich., Sept. 27, 1883.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Uniting Colonies of Bees.

Will Mr. Heddon please give his method of uniting bees, in the Weekly BEE JOURNAL? W. V. WEBSTER.

Quaker City, O., Sept. 12, 1883.

ANSWER.—If I have colonies to unite, I pick out such combs and such number of them as I wish to put the newly-made colony on, for winter, and then shake the bees all into a box together; then empty them in front of the hive, and let them all run in together, removing all but my choice in the queens, and caging her between the combs, as in any case of introducing, and liberate her in the same way. I very seldom have any fighting, and if you wish to prevent that, you might take the extra precaution of sprinkling the bees with slightly-sweetened water, scented a little with peppermint, or some other pleasant odor. Put in but little of the scent, and do not let outside bees get a taste of your sweetened liquid, and thus induce robbing. If the colonies united stood some distance apart, you might set the newly-formed colony in a cellar for a few days, and then lean a board in front of the entrance when you set them out to fly, just before sun set. Of course, tact is needed to get the minutia of the work done, so as to be perfectly adapted to the surrounding conditions.

Local Convention Directory.

1883. *Time and Place of Meeting.*

Oct 3.—Wentworth, Ont., at Hamilton, Ont.
Alex. Robertson, Sec., Carlisle.

Oct. 4.—Union Kentucky, at Shellyville, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.

Oct. 6.—Marshall Co., at Marshalltown, Iowa.
J. W. Sanders, Sec., Le Grand, Iowa.

Oct. 9, 10.—Northern Michigan, at Sheridan, Mich.
O. R. Goodno, Sec.

Oct. 9, 10.—Northern Mich. at Sheridan, Mich.
O. R. Goodno, Sec., Carson City, Mich.

Oct. 10.—Central Illinois, at Bloomington, Ill.
James Poindexter, Sec.

Oct. 10.—Cass County, at Logansport, Ind.
De Witt Brown, Sec.

Oct. 17, 18.—Northwestern, at Chicago, Ill.
Thomas G. Newman, Sec.

Oct.—Northern Ohio, at Norwalk, O.
S. F. Newman, Sec.

Nov. 2.—Iowa Central, at Winterset, Iowa.
J. E. Pryor, Sec., Arbor Hill, Iowa.

Nov. 3.—Mahoning Valley, at Newter Falls, O.
L. Carson, Sec.

Nov. 7.—New Jersey and Eastern, at New York.
J. Hasbrouck Sec., Bound Brook, N. Y.

Dec. 5-6, Michigan State, at Flint.
H. D. Cutting. Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER BOX

The Fall Crop of Honey.

The bee-keepers have been somewhat encouraged for a better collection of winter stores than it promised the morning of the frost. The weather has been warm and pleasant most of the time, and our pets have worked pretty well. The frost did not seem to hurt fall bloom very much, so we still hope we will not have much fall feeding to do; this we will all know, if we will examine when the honey flow is over. I met the vice-president of the Michigan State Society yesterday, in Marshalltown. I find him good in a talk about bees. We would like to have some good men at our next meeting, Oct. 6; if any of them are out this way, or even feel like coming on purpose; we are expecting a good turn out, for many have expressed a desire to be there then. The bee-keepers' interest is growing very fast in this part of our State. The demand for honey, both comb and extracted, is on its increase. Our people are getting afraid of glucose adulterations. J. W. SANDERS.

Le Grand, Iowa, Sept. 27, 1883.

A Good Paying Crop of Honey.

The weather is very cool and extremely dry. We have had scarcely any rain since June 15. Our bees have plenty of honey, but no brood; in fact, less brood than I ever saw at this time of the year. The goldenrod is in full bloom, but yields no honey; but why should a Kentuckian complain, after such a clover harvest as we have had? Besides, experience teaches us that the weekly visits of the good old AMERICAN BEE JOURNAL will brighten the prospects, and give new vigor to those who have to record "blasted hopes." I commenced the season with 75 colonies; and have increased to 130, mostly by natural swarming. I have taken 7,600 pounds of choice honey, of which 400 pounds were in the comb; the balance was extracted. I have sold, in our home market, the extracted honey, at 12½ cents per pound; and the comb honey at 16⅔ cents. Early in the season I sold 12 barrels of extracted honey at 10 cents per pound. The demand for honey is good; and I have sold all I have taken, and know that bee-keeping pays.

JOHN T. CONNLEY.

Napoleon, Ky., Sept. 26, 1883.

Worker Bees in Queen-Cells.

On page 433 of the BEE JOURNAL, A. Rickenbacher mentions a "Curious Freak of Bees," and Mr. Heddon's answer is: "I have never had a case like the one above referred to. I do not know as we have any precedent of the kind." I am quite surprised that Mr. Heddon and others have not noticed that workers very often get sealed up in old queen-cells. I have known for several years, that workers very often crawl into the queen-cells after the queens hatch, and sometimes get sealed up. A little observation on the part of apiarists during the following season, will reveal the fact that more than one worker in 50 hives will get sealed up in queen-cells.

R. S. BECKTELL.

Three Oaks, Mich.

White Cake Made with Honey.

DEAR EDITOR.—As requested I send you the recipe for the cake made with honey on which I took the first prize at the Tri-State Fair at Toledo, last month:

One-half teacup of butter, three cups of flour, one-and-a-half cups of honey, one-half cup of sweet milk, one-half teaspoonful of soda, one of cream of tartar, and the whites of three eggs.

Delaware, O. MAY BESSE.

Frost Killed All the Flowers.

The honey crop in this part of the country is almost an entire failure. Since the middle of July the bees have hardly held their own; I fear the late swarms will have to be fed, to give them enough stores to winter on. Last night we had a frost that wiped out all the flowers, so that this year will foot up rather short.

H. J. SCOLES.

Knoxville, Iowa, Sept. 26, 1883.

The "Scarlet Wing" Story.

I am quite astonished to read in No. 36, of the BEE JOURNAL, a ridiculous story from a correspondent about my having a queen with four hands and scarlet wings. Although I hardly believe that any intelligent apiarist has believed it, I wish you would publish my formal denial.

H. SONTAG.

Cucamonga, Cal., Sept. 13, 1883.

Parched Ground in Louisiana.

We have had no rain for about one month and a half, until to-day when we had a good one. The bees were really discouraged at the drough. There was hardly any honey secreted, the soil split and left the roots of many plants bare to the heat of the scorching sun, which ended their honey secreting. Snake root, golden-rod, smart-weed and boneset are opening fast, and the bees are booming with full force to get all of the nectar they can.

G. E. SONNEMANN.

New Iberia, La., Sept. 16, 1883.

Intelligent Work.

Bees have done passably well here this season, though it has been very dry, except in August. My 14 colonies increased to 32, and I have about 600 pounds of comb honey, which I am selling at 18 cents per pound. This is a large per cent. over my neighbors, and is the result of reading the BEE JOURNAL and the use of comb foundation. I hope it will long continue its weekly visits, and directed by its present editor, that its mission may be a successful one.

B. H. HOLT.

Adel, Iowa, Sept. 19, 1883.

6,000 lbs. of Honey from 30 Colonies.

I have now 70 colonies of bees; increased from 30 in the spring; have taken 6,000 pounds of honey, mostly extracted, and of an excellent quality; it is all basswood and clover honey. I wintered my bees, last winter, in an out-door cellar, built for the purpose, and lost none in wintering, but lost 4 by spring dwindling. My bees were in the cellar nearly 5 months. I have Italian bees, and think them far better, in every respect, than the native bees.

A. C. SANFORD.

Ono, Wis., Sept. 10, 1883.

☞ The Cass County Bee-Keepers' Association, organized on the 15th of August, will meet on the 10th of October, 1883, in Logansport, Ind. All persons interested in bees and honey are respectfully invited to come.

DE WITT BROWN, *Sec.*

☞ The quarterly meeting of the Marshall County Bee-Keepers' Association, will be held at the Court House, in Marshalltown, Iowa, on Saturday, Oct. 6, at 10.30 A. M. Subject for discussion, "Fall and Winter Care." All interested, in this and adjoining counties, are invited, for we hope to have a good meeting, and one of benefit to all.

J. W. SANDERS, *Sec.*, LeGrand, Iowa.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

How to Create a Market for Honey.

We have now published another edition of the pamphlet on "Honey as Food and Medicine," with more *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy 5 cents, postpaid; per dozen, **40** cents; per hundred, **$2.50.** 500 will be sent postpaid for **$10.00**, or 1,000 for **$15.00**. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit. Try it, and you will be surprised.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a statement of account every week.

Trial Trip—25 Cents.

As the season for Fairs has arrived, and wishing to be able to reach several thousands of the old-fashioned bee-men, and by the aid of the BEE JOURNAL to lift them up to higher ground, adopting newer methods and progressive ideas, we make the following very liberal offer: We will send the Weekly BEE JOURNAL till Dec. 31, *on trial, for 25 cents.* In order to pay for getting up Clubs, we will give a copy of Fisher's Grain Tables, or Scribner's Lumber and Log Book, to any one who will send us five trial subscriptions (with $1.25); for a club of *ten* we will give a cloth copy of Bees and Honey; for a club of 15, a cloth copy of the 7th edition of Cook's Manual of the Apiary; for a club of 25, we will present both the Manual and Bees and Honey. If any one wants these Books for nothing, here is an excellent opportunity to get them for a little exertion.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey* at Fairs, will sell almost a fabulous quantity of it.

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1 year, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with $6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For four subscribers, with $8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with $10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

* * *

Preparation of Honey for the Market, including the production and care of both comb and extracted honey instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

* * *

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

* * *

Books at Fairs.—Those who make an exhibit at Fairs will find that an assortment of Books and Pamphlets would sell and leave them a profit for handling. We will send such, postage prepaid, at 25 per cent. discount; or if the purchaser pays express charges, we will supply any of our own publications at 40 per cent. discount.

* * *

☞ The new two cent rate of postage for letters went into effect on October 1. Three cent postage stamps will now be but little used. For all fractions of a dollar sent to us hereafter we should prefer either *one-cent*, or else five or ten-cent postage stamps, or a Postal Note. Do not send coins in any letter.

* * *

☞ T. B. Peterson & Brothers, 306 Chestnut St., Philadelphia, Pa., publish this day, "THE BRIDE OF LAMMERMOOR," being the *second volume* of their new and cheap edition of "THE WAVERLEY NOVELS," BY SIR WALTER SCOTT, which will be completed in Twenty-six Weekly Volumes, each volume being a novel complete in itself, and one volume will be issued every Saturday until the whole are published. Each book will make a large octavo volume, uniform with "Ivanhoe," and "The Bride of Lammermoor," have on it an Illustrated Cover, and will be sold at the low price of Fifteen Cents a volume, or Three Dollars will pay for the full and complete set of Twenty-six volumes, and copies of any of the novels, or complete sets of the edition will be sent to any one, post-paid, at these rates.

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PATENTED, JUNE 28 1881.

We have just put in several new machines and also a larger engine in our factory, consequently we are in better shape to fill orders than ever for Sections, Shipping Crates, etc., etc. We make a specialty of our

"BOSS" ONE-PIECE SECTIONS,

Patented June 28th, 1881.

We can make the "Boss" One-Piece Sections any size or width desired. Send for Price List.

We make the Half-Pound Section any size desired.

JAS. FORNCROOK & CO.
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Iroquois Strain. Four Yards.

Correspondece cheerfully answered Prices reasonable
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Choice Queens!

I am now up with my orders, and can send **QUEENS** by

RETURN MAIL.

I am now culling them down to the very best.

J. T. WILSON,
Mortonsville, Woodford Co., Ky.
6BCtf

Friends, if you are in any way interested in

BEES OR HONEY

We will with pleasure send you a sample copy of the **Monthly Gleanings in Bee-Culture,** with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes,** all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly*, to
Ctf A. I. ROOT, Medina, O.

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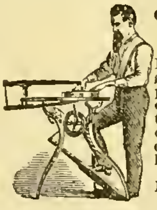

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☞ Send for my Illustrated Catalogue.
5Ctf **PAUL L. VIALLON**, Bayou Goula, La.

Sweet Clover

AND OTHER SEEDS.

Having a large stock of the new crop of Sweet Clover Seed, I can fill orders at **30c.** per pound **$4** per peck, or **$15** per bushel.

Also, all other SEEDS for HONEY PLANTS,

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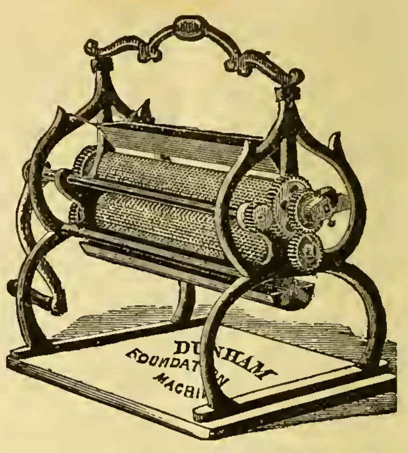
82 Colonies Italian Bees For Sale; $5 per colony.
JULIUS FOSCH, Elmore, Ottawa Co, Ohio.



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Inventor and Sole Manufacturer of

THE DUNHAM FOUNDATION MACHINE

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Your machines are undoubtedly the very best in existence for heavy foundation.
CHARLES DADANT & SON, Hamilton, Ill.
Nov. 24th, 1882.

And the following from the President of the North American Bee-Keepers' Association:

I am quite positive that your Foundation Mills are ahead of anything yet invented.
D. A. JONES, Beeton, Ont., Canada.
Jan. 29th, 1883.

I send you samples of Foundation which I am manufacturing on one of your machines, in sheets 9x18, which measure 11¼ feet to the pound. I think it superior to any samples of thin foundation I have seen.
J. G. WHITTEN,
Aug. 14th, 1882. Genoa, N. Y.

Send for description and testimonials to

FRANCES DUNHAM,
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One 4-Horse-Power

ENGINE AND BOILER,

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We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal*, both for $3.00 a year.

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OR, MANUAL OF THE APIARY.

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A. J. COOK,
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OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

VOL. XIX. CHICAGO, ILL., OCTOBER 10 1883. No. 41.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

☞ Next week the annual re-union of bee-keepers will be held in Chicago. The present indications are that it will be most interesting and largest gathering ever held in the Northwest. Many of the prominent apiarists in this region have already indicated their intention of being present, and we think that no one who can possibly attend, should be absent. The Rev. L. L. Langstroth writes us that his health and energy is a surprise to himself as well as his friends, and he fully intends to be present. The invitation is cordial and universal—COME.

◆

☞ Mr. M. L. Trester, Secretary of the Nebraska State Association, has sent out blanks to be filled up by the bee-keepers of that State, giving the statistics necessary to the proper estimate of the honey crop in that State. This is commendable, and should be followed by similar efforts in all the States. Will the secretaries please take the hint?

◆

☞ The trial between exhibitors making comb foundation at the Tri-State Fair, was quite an attraction. We met Messrs. Vandervort and Pelham for the first time, and were well pleased with them and their machines. The Given press also did excellent work, and was admired by all who saw it. Dr. Besse had a good exhibit of honey and supplies, and added largely to the interest of the show. E. T. Lewis & Co.'s exhibit was large and varied, and the faithful services of Mr. Puhl, in showing the different articles to visitors, made it very attractive to bee men.

Honey Harvest in Scotland.

From a letter just received from Mr. J. D. Hutchison, of Glasgow, Scotland, we glean the following concerning the honey harvest of that country. There, as well as in America, the early frosts and cold and wet weater have ruined the fall crop of honey. Mr. H. says:

From the accounts which have been received from various parts of Scotland, it appears that the honey harvest is to be an almost entire failure. Owing to the late spring, bees had to be fed to prevent their starving. Although they bred well and swarmed numerously, the wet and cold weather that prevailed during almost the whole summer hindered the storing of honey. After a bad summer there is generally the prospect that in autumn the heather will aid in making up the deficiency, but this year, unfortunately, this hope will not be realized, as the heather yields little or nothing.

Bee industry is now becoming more generally cultivated, and in average years is highly productive. The weather has been very broken for sometime past, so the most of bee-keepers have taken home their bees from the heather, and are preparing them for the ensuing winter.

◆

☞ Concerning the bee and honey exhibits at the St. Louis Fair, Messrs. Flanagan & Illinski, of Belleville, Ill., writes as follows:

The show of bees and honey at the St. Louis Fair was superior to that of last year, being much more extensive and in better order, and more exhibitors taking part. Wm. Little, of Marissa, Ill., had 1st and 2d premium ($20) for the best display of Italian bees. Mr. E. Armstrong, of Jerseyville, Ill., obtained 1st premium on the best crate of honey, and his display certainly deserved it. Your humble servants got the 1st premium for the best display of apiarian implements. Three years ago not one hive or bee or crate of honey were exhibited, but this year there was a display that was attractive to all visitors to the Fair. Your "Honey as Food and Medicine" went like hot-cakes. The management have our thanks for the privilege of selling honey during the Fair; a privilege not accorded heretofore.

The New Postal Laws.

As many are in doubt about the new regulations of the Post Office Department, and to save trouble to our subscribers, we will recapitulate them:

The postage on letters is 2 cents for each half-ounce or fraction thereof.

The old two and three-cent stamps now in use will continue valid, and must be accepted in payment of postage whenever offered in appropriate amounts.

Postage to foreign countries remain unchanged, with the exception of Canada. A letter goes to Canada for two-cents; but Canadians have to pay three-cents for a letter to the United States as formerly.

The drop-letter rate of postage remains the same—that is, two-cents per half-ounce or fraction thereof, at free-delivery offices, and one-cent at all other offices; and no changes are made in the rates of postage on second, third and fourth-class matter.

An item has been going the rounds of the papers, to the effect that a late order of the Postmaster General provides that no package, parcel or letter will be forwarded upon which the postage has not been fully paid. This is erroneous, as no such an order has been issued. Letters weighing over one-half ounce, on which one full rate has been paid, will be forwarded, and the balance collected on delivery. If a letter contains a one or two-cent stamp, or no stamp at all, it will be returned to the sender if he is known, and otherwise the person to whom it is addressed will be notified, and upon receipt of the postage the letter will be forwarded.

◆

☞ Mr. A. Benedict had at the Tri-State Fair an observatory hive with some of the most beautiful bees we ever saw—well marked and of a uniform and large size—the result of 20 years of careful breeding.

Treatment and Cure of Foul Brood.

The London *Journal of Horticulture* contains the following on the above subject:

A correspondent, some time ago, sought information on this subject. So far as I know no more valuable hints and instructions have appeared than in the columns of the *Journal*, and especially I would direct attention to what has been written by Messrs. Cheshire and Cowan. From these writings I will cite. Mr. Cheshire observes—" When foul brood breaks out it attacks grubs only, and for a fortnight or so no actual difference is effected, but as it spreads population is reduced from two causes: Young bees do not all hatch out, some die prematurely, and the odor generally diffusing itself takes all heart and energy out of the workers; the brood-nest gets by degrees choked, and the laying energy of the queen is thus repressed. The general effect is the gradual weakening of the colony it is true, but all can see that time is required for the destroyer to accomplish his purpose, and despite his sad work making havoc within, the bees may appear to be in the full swing of unhindered progress until the disease has a firm hold of every comb.

" The curability of foul brood is the next point upon which I wish to insist. While we feel sure that the doctor can do us no good, we will not take his medicine, and while bee-keepers believe that foul brood must run its course and work out devastation and ruin nothing will be done to arrest it. I assert its curability because I have again and again cured it, and in this position I am pleased to be able to refer to one of the most prominent, certainly one of the most scientific and successful apiarists of our day—T. W. Cowan, Esq., chairman of the committee of the British Bee-Keepers' Association, whose experience in the treatment of this malady has been great, but not greater than it has been successful. Mr. Cowan, in reply to a request that he would permit a publication of his methods, has favored me with a lengthened letter, in which he says, ' I am quite, I think, of your opinion as regards foul brood, that is to be cured if attacked in earnest. You know I had it in my apiary, and it was a source of great trouble to me, but I stamped it out with salicylic acid. My proceeding was to excise any very bad places, and when I found cells affected here and there I merely uncapped them and sprayed the combs with the solution of which I send you the recipe. I found generally in mild cases one application was sufficient, but in more severe ones two or three doses produced a complete cure. I found that if the cells were uncapped before they were punctured and sprayed with the solution, injecting a larger quantity into the affected cell so as to eject the viscid mass, there was no fear of the disease appearing again. In this state the viscid fluid in the cell is of a light brown, and is not permeated with spores to such an extent as when it is allowed to remain until it becomes highly colored, and the covering much depressed. I doubt very much if in this stage it is very contagious. I have no doubt the acid acts on the spores and destroys their vitality. So far so good. Now as regards the honey that is in the hive, and which is supposed to contain the spores (although I must say I have never been able to detect any by the microscope), how are we to insure their being destroyed? Simply by uncapping it and feeding the bees on syrup containing the acid, which they will store with the uncapped honey, or uncap it and give it a good spraying with the acid solution. I have done both, but cannot say if it was really required; but as I think prevention is better than cure, and as it is not much trouble, there can be no harm done.

" 'All my hives are scalded, and so is everything that has had anything to do with the hive, and afterwards everything is washed over with the solution. I believe the germs of the disease are carried in the air, and we can feel safe; I, therefore, always put acid in all the food I prepare. I examined six of my hives, and all were healthy but one, and that I thought was also healthy. It was an early swarm. This year I had thrown off a swarm and a cast, and had given me six small one-pound sections nicely filled. I looked on the ten frames and found no queen and no brood. There was one cell covered, but not punctured, but I at once recognized as a foul-broody one. Now the hive had not been queenless very long, as about ten days ago I saw the queen; and, although, she was not laying, there was a small quantity of brood hatching out, and all did hatch out except this one cell; it was uncapped and injected with the solution, and the other combs and bees sprayed with it. I have no doubt it will prevent its spreading in the future, as I shall not hesitate in using these combs in uniting if I require them.

" ' I have examined six hives to-day, fearing to find foul brood, but have not detected a single cell in any of the other hives. Now, how did this appear? It seems to me probable that it was brought there by some of the bees from outside, or a spore might have been lurking in some of the corners of the hive and had escaped the solution. This proves to me that it is impossible to tell when it may break out in an apiary; and as we know from experience that salicylic acid destroys the spores, I think it not only beneficial but important that a certain quantity of this acid should be in all the food given to the bees. Two years ago I tried feeding the bees on syrup containing a strong dose of acid without spraying the combs, and I found that the disease gave way to this treatment; but I find the other plan, that of uncapping and spaying, the most rapid. I do not mean to say if a hive is neglected, so that all the brood is rotten, it can be cured; but if taken in time, as every apiarist would do, it has been and can be cured. THOS. WM. COWAN.

The table of recipes Mr. Cowan encloses will explain themselves.

Salicylic acid solution for mixing with syrup for feeding bees, painting over hives, and spraying combs, etc., for the prevention of foul brood.

Water	4 pints.
Salicylic acid	1 oz.
Soda borax	1 oz.

Spring and summer food for bees :—

White lump sugar	10 lbs.
Water	7 pints.
Vinegar	1 oz.
Salicylic acid solution	1 oz.
Salt	½ oz.

Boil for a few minutes.

Autumn and winter food for bees :—

White lump sugar	10 lbs.
Water	5 pints.
Vinegar	1 oz.
Salicylic acid solution	1 oz.
Salt	½ oz.

Boil for a few minutes.

Northwestern Convention.

The Northwestern Bee-Keepers' Association will hold its fourth annual convention at Owsley's Hall, N. W. corner Roby and West Madison Sts., Chicago, Ill., on Wednesday and Thursday, October 17 and 18, 1883, commencing at 10 a. m. on Wednesday and holding five sessions.

The Rev. L. L. Langstroth (the father of American apiclulture) has promised to be present, and many of the most prominent apiarists of the Northwest will be there and aid in the deliberations and discussions.

This meeting will be held during the last week of the Inter-State Industrial Exposition, and reduced railroad fares may be had on nearly all the railroads. A cordial invitation is extended to bee-keepers every where to attend this annual reunion.

Meals may be obtained at the Restaurant near the Hall at 25 cts. each.

Beds may be secured at the Gault House for $1, or at other Hotels at regular rates.

THOS. G. NEWMAN, *Sec.*
C. C. MILLER, *Pres.*

☞ " Take me out to see your hybrids." was the label on a mammoth smoker exhibited at the Tri-State Fair by Messrs. E. T. Lewis & Co., Toledo, Ohio. It was about 2 feet high, and proportionate otherwise, with a whistle and an organ, to make music as operated. It caused many an audible smile among the bee men who examined it.

☞ Please announce that the Iowa Central Association, will meet at Winterset, Iowa, Nov. 2, 1883.
Z. G. COOLEY, *Sec. pro tem.*

Bees in a Religious Meeting.

A correspondent of *Farmers' Home Journal*, in the following letter, tells how a congregation was warmed and sinners made active, lately, in Kentucky, by a swarm of bees:

"You may have read the story of Sut. Lovingood's dad in a hornet's nest, but that affair was not a circumstance to what took place at the Methodist church in Lafayette, Ky., on last Sunday. Your correspondent was not present, and feels glad that he was not, but has the facts from a reliable gentleman who experienced the quickening power from the business end of a bee, which he thinks would rival the eloquence of Beecher or Spurgeon in stirring up a sleepy congregation.

"Rev. J. W. Bigham, the good pastor and eloquent preacher, occupied the pulpit. Whether or not he needed any assistance in warming up his congregation, as preachers like to do, just before conference meeting, he got it, in the form of a swarm of angry bees. The atmosphere seemed alive with the insects. They poured into the house by wholesale, precipitating a revival. Sleeping members were aroused from their slumbers to a shouting pitch, before the preacher reached the point in his sermon where the shouting should come in, and the sermon was cut short. The spirit (or rather the bee) soon pervaded the entire congregation, and the ladies also were quickened to a sense of the awakening, losing all care for their bangs and curls. Never did worshipers assume a more humble attitude. All who could, crawled under the pews, while those made excessively warm by an inspiring touch from the sweet singers, continued in the more lively exercise. Real solid joy, however, did not take possession of the congregation until the doors and windows were all closed, and the regular battle of bee-killing was over. The bees were finally stopped out of the house, when they commenced on the horses and men out doors. A number of horses broke loose and ran away. Mr. John W. Davidson had a fine buggy torn to pieces by his horse trying to escape from the bees. A pair of fine bay horses, belonging to Mr. Ed. Moses, standing to the breast yoke with loose traces, and hitched with very strong halters, were literally stung to death; one of the horses died on the spot in less than two hours. Several horses were stung so badly that they could not move from the place when cut loose. Messrs. John Covington, Ed. Moses and others were badly stung in trying to rescue their horses.

"Brother Bigham closed the services by announcing that there would be a meeting next Sunday at the usual hour, provided the bees should settle. The ladies, however, had to remain in, with closed doors, until a bolt of musquito goods was procured for veils. One lady concluded she could run the blockade—she was not afraid of bees any way; but she had never come in contact with a swarm of missionary bees, and never knew how beautifully she could perform, until she met these red-hot ministers.

The National Convention.

Mr. C. F. Muth has sent us the names of the members attending the North American Bee-Keepers' Society at Toronto last month. They are as follows, and 101 in number:

CANADA.—W. F. Clarke, F. Malcomb, Rev. F. Allen, S. T. Pettitt, John Myers, S. C. McNeil, James D. Long, S. Corneil, R. McKnight, R. Harper, Mr. and Mrs. Robert H. Myers, J. B. Hall, J. E. Schantz, John Baxter, Mrs. Wm. Bryce, Rev. Wm. Blain, A. G. Willows, H. A. Russell, W. Ellis, A. Crichton, H. Dobson, C. D. Corbin, A. D. Allen, S. Wood, O. Snyder, A. Grove, E. Mullholland, A. Douglas, G. B. Jones, W. H. Morrison, I. P. Blakeley, W. Nixon, H. Lipsett, Rev. J. R. Black, J. Anderson, Mr. and Mrs. S. G. Holly, W. C. Wells, Wm. Buglass, A. E. Gilpin, Chas. T. B. Jones, W. G. Russells, Mrs. W. G. Russells, Miss Edith Russells, Jacob Spence, Mrs. Jacob Spence. In all, 47.

NEW YORK.—W. E. Clark, D. Baker, J. C. Newman, T. Pierce, G. W. House, J. E. Stanley, G. W. Stanley, R. Baker, D. A. Parmeston, Mr. and Mrs. E. B. Ross, W. V. Bosworth, Jr., H. F. Gates, W. H. S. Grout, H. S. Elkins, F. L. Smith, W. T. Falconer, L. Whitford, C. Humphrey, M. L. Spencer, S. L. Sleeper, L. Corey, E. C. Hubbard, J. H. Umpleby, Mr. and Mrs. W. L. Coggshall, W. E. Moulton, Ira C. Nicholi, Mr. and Mrs. C. Favill. In all, 30.

OHIO.—C. F. Muth, A. I. Root, G. W. Freeman, F. Whiteside, Dr. H. Besse, Miss May Besse. In all, 6.

MICHIGAN.—Prof. A. J. Cook, Dr. C. E. Rulison, R. S. Taylor, Wm. Moorhouse, W. Harmer. In all, 5.

TEXAS.—Judge Andrews.

KENTUCKY.—W. C. Pelham.

GEORGIA.—Dr. and Mrs. J. P. H. Brown.

COLORADO.—W. L. Porter.

FLORIDA.—W. S. Hart.

MASSACHUSETTS.—S. M. Locke.

NORTH CAROLINA.—G. E. Boggs.

IOWA.—Mr. and Mrs. O. O. Poppleton.

ILLINOIS.—Dr. C. C. Miller.

PENNSYLVANIA.—C. J. Haight, J. McGonnell.

The life members, having paid $10 each for such membership, are D. A. Jones and Thos. G. Newman.

There are several honorary members of the Society, and among them the Rev. L. L. Langstroth. The names of the others may be gleaned from former reports.

In 1880-81, the list of members contained 105 names.

☞ Articles for publication must be written on a separate piece of paper from items of business.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., Oct. 8, 1883.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—Our prices are 7@9c. for extracted, and 14@16c. for comb honey on arrival.

BEESWAX—Arrivals of beeswax are good at 25@28c., and the demand is fair.

CHAS. F. MUTH.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 17@21c. Dark and second quality, 14@15c.; extracted white clover in kegs and barrels, 9@10c.; dark, 8c.

BEESWAX—Prime yellow, 27@29c.

H. K. & F. B. TRURBER & Co.

CHICAGO.

HONEY—Comb honey has sold freely for the past two weeks, and stocks are at present low. 1 lb. sections of white comb are bringing 18c.; 1½ to 2 lb. sections of same quality, 16@17c.; various sized sections of white comb, 15@16c. Extracted honey from 8@10 cts. per pound, according to body and flavor.

BEESWAX—Yellow, 32@33c.; dark, 25c.; medium, 30c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—There is a fair jobbing trade. Offerings are not large. Choice qualities command extreme figures. White to extra white comb, 16@20c.; dark to good, 10@13½c.; Extracted, choice to extra white, 8@9½c.; dark and candied, 6½@7½c.

BEESWAX—Wholesale, 27@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Quiet. Salable at appended figures, but generally held higher. Strained and extracted at 6¼@7c.; comb at 14c.

BEESWAX—Ready salable at 25@26c. for prime.

W. T. ANDERSON & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—Comes very slowly and sells as fast as it comes at 18@19c. for best white in 1 lb. sections, and 17@18c. for 2 lb. sections. Second quality is very slow. Extracted usually sells very slowly in our market.

BEESWAX—None in Market.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—We quote our market at 18@20c. for 1 lb. white clover; 18@20c. for 2 lb. white clover. Extracted, 8@10c.

BEESWAX—We have none to quote.

BLAKE & RIPLEY, 57 Chatham Street.

KANSAS CITY, MO.

HONEY—A large part of the local crop in this section has been marketed, though considerable remains yet in the hands of producers. Very little California honey in this market this season, except extracted, which is in fair supply at 10@11c. for choice new, and 8½@10c. for dark or candied. Choice bright comb 2 lb. sections, 18@19c.; 1 lb. sections, 19@20c. Demand is fair for the better grades.

JEROME TWICHELL, 536 Delaware Street.

☞ The next regular meeting of the Mahoning Valley Bee-Keepers' Association will be held at Newton Falls, O., on the first Saturday of November, 1883. L. CARSON, *Pres.*
E. W. TURNER, *Sec.*

☞ The Bee-Keepers' Association of Central Illinois will hold its next meeting on Wednesday, Oct. 10, at 10 a. m., at 205 South Main street, city of Bloomington. All interested, in this and adjoining counties, are invited to attend.

J. L. WOLCOTT, *Pres.*
JAMES POINDEXTER, *Sec.*

CORRESPONDENCE

For the American Bee Journal.

The New Races of Bees.

G. M. DOOLITTLE.

About a year ago I gave my opinion regarding the Cyprian and Syrian bees, stating that I should not have anything more to do with the Cyprian on account of its vindictive disposition, and although not favorably impressed with the Syrian, I should give them a more thorough trial during the season of 1883. To this end I procured queens of the Syrian or Holy Land race of three different breeders during the fall of 1882, so I could have full colonies of those bees in time for the honey harvest.

The result of this season's work with them proved the same as that of 1882, which is, that for this locality the Holy Land bees are practically good for nothing as honey gatherers. With a locality where there was a steady flow of honey the case might be different, but here we get little or no honey until basswood, and these bees seem to think that a large flow of honey should mean lots of brood, so at brood-rearing they go, the result of which is, nearly all the honey they gather is used up rearing an extraordinary amount of brood, which hatch so late in the season that the bees from said brood are too late to gather honey, hence become consumers of the little honey already in the hive. Therefore, when fall arrives, we have a hive overflowing with bees, with little or no honey, and scarcely a pound of surplus to recompense the owner. All are aware of my views regarding the secret of honey-producing, lying in, getting the bees just in the right time for the honey harvest (neither too early or too late), that being of more moment than any one other thing pertaining to honey producing.

That the Syrian bees cannot be thus managed in this locality is the reason of my saying they are practically good for nothing. Then they have another exceedingly bad feature, which is, that before the young queens are fertilized in the present hive, which has cast a swarm, fertile workers spring up, and the result is a queenless colony, unless great pains are taken to introduce a laying queen. This, with me, as I allow natural swarming, would be a very serious drawback, but might be got along with if they were enough better honey-gatherers to warrant an extra outlay of time in looking after the young queens. However, as in all respects, unless it is in wintering, they are inferior to the Italians. I felt warranted in doing away with them entirely, and to-day finds my yard without a Holy Land bee in it.

After deciding a year ago that I would have nothing more to do with the Cyprians, I thought, perhaps, I had been a little hasty, as I had up to this time but one queen of that race in my yard. As a whole, I was pleased with them, except their great disposition to sting whenever the hive was opened. When spring opened I found that my Cyprian colony had wintered the best of any colony I had except the old Holy Land colony, and hearing so many favorable reports of the Cyprians, I concluded to give them a further trial. Consequently I procured a queen of B. F. Carroll and E. T. Flanagan, as they seemed to prefer them to any other bees. These, with my old one, made 3 colonies, and as far as getting the bees in the field in time for the harvest, I am well pleased with them; as in fact I am with all other points about them except the "stinging point."

If I could call the queen I had from Mr. Flanagan pure, I should think there was some prospect of getting peaceable Cyprians, but she evidently is not pure, for her queen progeny is of a mixed multitude, being all the way from jet black to as golden yellow as I ever saw an Italian queen, while the daughters of the Corroll queen, and from my old colony, are nearly duplicates of the mother. The bees from the Carroll queen are the worst to sting of any bees I ever saw, and I thought the original colony was bad enough. Mr. Carroll says, in a late number of the BEE JOURNAL, that he has Cyprian bees which he can handle without smoke, veil or gloves, but he does not tell us whether he considers them pure or not; neither does he tell us how many colonies he has of the stamp produced by the queen I got of him.

Now, Mr. C., in all candor, and desiring information, I ask how you manage such bees as the queen you sent me produces. That you knew they would sting is proven by your saying when you sent her, that if she proved too "firey," I could send her back. Perhaps I may do so in the spring, when even the Cyprians can be handled quite comfortably, but I would not open that hive to-day to get that queen for all the queens of like stamp there is in the world.

Mr. T. S. Bull, a large bee-keeper of Valparaiso, Ind., called on me not long ago, and I told him of these bees. As he wished to see them, I took off the cover to the hive and raised the quilt a little, smoking them all the while, but for all that a cloud of angry bees rose in the air, crawling into our pockets, under veils, and where ever they could get, all the time singing such a sweet tune, like an angry bee can when he gets in your hair. They seem to care nothing for smoke, and how any one can manage them for extracted honey, is more than I can understand. I worked them for comb honey, and to say that I was glad when I had the sections off that hive does not half express it. In shaking the sections to rid them of bees, nearly all the bees would take wing and come for me like so many angry hornets; and, although I care little for stings, I confess that my flesh fairly crawled at the sound of a quart or more of angry bees hissing about my bee-veil, and occasionally stinging through pants and shirt.

Now, if any one can tell how I can manage these Cyprian bees from the time the honey harvest commences until winter, I shall be glad to keep a part of Cyprians in my apiary, but if they cannot, I shall have to bid them adieu, for their stinging qualities more than over-balance all their good traits.

Borodino, N. Y.

For the American Bee Journal.

Winter Ventilation and Protection.

DR. G. L. TINKER.

The experience of bee-keepers appears to be widely different on the proper size of the entrance of a hive in out-door wintering. One will tell you to make it not larger than ⅜ by 4 inches; another ⅜ by 8 inches; and still others recommend ⅜ by the width of the hive inside. My own recommendation for a full colony is to make the entrance ¾ by 8 inches.

To keep out mice, set the hive on a stand made as follows: Make a box 4 inches deep, just the size of the bottom of the hive, out of heavy boards 4 inches wide. If the side boards are 5 inches wide, the bottom can be nailed inside into rabbets made in the lower edge of the front and rear pieces. The stand looks better if the bottom is nailed inside. Lastly, nail four pieces 3 inches wide by a foot long to the front and rear corners. These pieces should be planed smooth, and all ought to be painted. Now set the stand on four bricks let into the soil on a level, and fill quite full of dry sawdust. Sit on the hive and move about until it fits firmly. There is very little danger from mice to a colony on such a stand, and besides, it is far more convenient for the bee-keeper. No sawdust or other material need be put around the hive to keep down weeds, for the weeds will grow anyway, unless the sawdust is often removed. The scythe is the best thing to keep down the weeds and grass. The stand also keeps the hive up from the ground, so that there is less danger from dampness. Again, a lot of hives set on these stands presents a very neat appearance. Heretofore I have had my hives set near the ground upon bricks, and I find that there are many disadvantages in having them set so low down.

My reason for so large an entrance is, that bees require a large amount of fresh air in winter, and the most natural point for the air to reach them is through the entrance. There is nothing more certain than that a very small entrance, ⅜ by 4 inches, is too small for the bees either in winter or summer. The proper size of entrance for a strong colony in summer, according to my mind, is ¾ by 13 inches. When the bees are breeding in the spring, and the nights are cool, then the entrance should be small, but at no other time of the year.

With a large entrance, there should be a very small amount of upward ventilation allowed, and that through not less than 7 inches of chaff gently pressed down. Some fine chaff like timothy is the best. It is thought that the cracks where the cover fits to the hive will let out sufficient air, unless very tight, but no large openings should be allowed in the cover. If put in loosely, the wet chaff on the surface, over the cluster, can be replaced with dry, three or four times during the winter; otherwise it will be liable to get moldy and create a bad odor. I do not, on this account, recommend a chaff cushion over the bees, because it would become quite foul before spring, unless more air was allowed to pass in and out of the cover than would be advisable. The point is, to allow no more upward ventilation than is necessary to permit the dampness coming from the bees to arise to the surface of the chaff. I should say, that if the chaff over the cluster was, after a time, found dry, that the ventilation through the cover was too free. For, in my opinion, the only benefit to be derived from upward ventilation is in allowing the dampness to pass upward at the same time that the heat of the bees is effectually retained, which it can be if there are no large openings in the cover.

The spaces between the frames should be covered with a cloth, a clean woolen cloth preferred. Sticks about ⅜ of an inch square should be placed crosswise of the frames to hold the cloth up so that the bees can pass over the tops of the frames. But I think that the bee-keepers will find to their cost that any device to hold the cloth up from the frames, so as to leave a large space, is a bad thing. However, a large space above the chaff is quite necessary.

Again, with so large an entrance it is necessary to leave a board against the front of the hive to keep out sunshine and wind. Or an alighting board 8 inches wide may have projecting arms 2 inches wide nailed to each end and fastened to the sides of the hive by two nails or wooden pins on each side, which can be taken out and the board lifted up and fastened to the body of the hive, so as to keep out sunshine and wind. This is a device that all bee-keepers will appreciate, and it is free for all to use. It will be attached to my *new hive* which I shall shortly introduce to bee-keepers.

In out-door wintering, all sides of the hive should be protected by 3 or 4 inches of sawdust or chaff, or the combs should all be taken out but five, and these should have passage ways cut through them and wooden tubes inserted. If this is not done the bees will often close up the openings made before winter sets in. Put a division board each side of the five combs, and fill the spaces between them and the sides of the hive with loose chaff. It will be found cheaper to do this than to make chaff cushions for the purpose. This latter method of protection is not easily carried out except in shallow hives, but it is believed to be cheaper than to use an outside case for a hive to be filled in with packing. The five combs should be spaced one-half inch apart, and contain not less than 5 lbs. of honey each.

Bees can be wintered in ordinary winters by various methods, but the great question with bee-keepers is, not what plans of ventilation and protection sometimes succeed, but what plan will secure the most "favorable conditions" so that the bees may be able to resist the vicissitudes of a very hard winter as well as a mild one, if it should happen to come. It is thought that the methods here given will secure these "conditions" as far as it is possible to afford them in out-door wintering. But I would place more stress upon the mode of ventilation and the management given than upon the amount of protection. Yet it would not do to abandon all protection, even if it could be done without loss, for the protection afforded will amply repay the time and labor taken to give it, in the saving of stores to the colony. It may be added, that the preparation of a hive of bees on the summer stand for winter requires as much, or more labor to do it as it should be done than to carry hives into cellars. Yet there is no doubt, in my mind, that out-door wintering will give the best results, unless at points far North, where the cellar or bee-house is preferable.

New Philadelphia, Ohio.

For the American Bee Journal.

How I Winter My Bees.

H. R. BOARDMAN.

Judging from the numerous articles in the bee papers upon the subject of wintering our bees, one would justly conclude that we ought to be able to surmount all of the difficulties that have heretofore existed, but from the numerous inquiries I have received of late upon that subject, it is evident that with the average bee-keeper, wintering is attended with much uncertainty, and disastrous losses are not uncommon even with those who have had many years of experience.

In view of these facts, I shall not attempt to tell you how to winter your bees, but will describe as well as I can how I winter mine, and in doing so, I am aware that I shall run against the pet theories of many very substantial bee masters.

The bee house in which I winter my bees will first claim a brief notice. The building is double-walled, packed with seasoned sawdust 12 inches thick, with sawdust also on the floor over-head, making it frost proof. It is divided into two or more rooms, one of which is used for an ante-room between the bee room and the outside, and also through which the air must pass before reaching the bees, and thus modifying it *a la* sub-earth ventilation.

'The house I have used longest has three rooms, two in which to store the bees with the ante-room between. This room also contains a stove used for raising the temperature, expelling the moisture, and facilitating ventilation whenever occasion requires. A scuttle opens into the chamber from the ante-room. The chamber is ventilated by a window in each gable, all of which may be opened or closed at pleasure.

The ground floor is cemented upon a layer of pounded stone, and is as firm as a rock, thus preventing any disturbance by jaring.

The windows are small, and provided with shutters inside by which the rooms can be made perfectly dark. The doors are also double.

The hive I use is a deep 8-frame hive, flat, movable cover on top, open bottoms, ⅜ inch bee space on top of the frames under the cover.

I prefer that bees breed as late as possible, and go into winter with plenty of young bees, a good queen, and plenty of sealed stores gathered in the fore-part of the season. I disturb them as little as possible late in the season, after they are disposed to become dormant.

I set them into the bee house as near Nov. 15 as the weather will permit, and let them remain until April 15, if favorable conditions can be maintained. I choose a cool, not a cold still day, having previously prepared the rooms by covering the floor with seasoned sawdust, then having lettered and numbered the hives with a piece of white chalk, so as to render mistakes impossible in setting them out on the same stands again. I take each hive up from the bottom-board or stand, and carry them into the bee house, and set them upon stringers previously placed there to receive them, so that when so placed the air has free access beneath the hives which are bottomless.

Having placed one row around the outside, I lay stringers on the top of these upon which I set another row of hives, and so on as high as I can conveniently set them. I use 2x4 inch stringers on the bottom, and one inch on top of the hives. A thermometer is hung in each room, and a careful record kept of the temperature in the rooms and also outside, visiting the rooms at least once each day for that purpose, noting also anything I may think important.

The hives are only ventilated at the bottom. The rooms are kept well ventilated, and at a temperature averaging near 45° somewhat below in the forepart of the winter, and above in the latter part. After being set in, the bees remain very quiet until sometime in February, unless disturbed by an unusual warm spell.

Sometime in February there will be a noticeable increased activity, and the thermometer will indicate a higher temperature. This is an indication that brood rearing has commenced. If the weather continues warm for a long time, and the bees become very uneasy, I sometimes set them out at this season for a flight, but consider it of no benefit if the temperature can be kept under control, which I endeavor to accomplish by opening the outside doors at night and close them in the day time.

I have observed that when the temperature is quite low for a considerable time, after brood-rearing has commenced, that a bad condition is almost sure to follow, and dysentery and spring dwindling is often the result. Therefore, I am careful at this time to see that the temperature continues favorable for the brood, and the result is a hive full of bees when setting out in the spring, and a considerable portion of them young.

If the temperature is inclined to continue too low, I resort to artificial heat, and from several years experience, I am satisfied that there is no means of ventilation equal to it, and with judicial use I think it will always be attended with good results.

When the flowers of spring come and the bees can find employment gathering pollen and honey, I feel that the time has come to set them out. Then on a warm pleasant day I set them each out upon the stand from whence they were taken in the fall, and the warmer and pleasanter the weather the finer will be the condition of the bees. But if the weather is cold and damp, when they are set out, a bad condition will be induced however perfectly they may have been wintered.

East Townsend, O., Sept. 24, 1883.

For the American Bee Journal.

The Problem of Wintering Bees.

JAMES HEDDON.

We have been told by some of our brothers in apiculture, that "cold" was the cause of dysentery in bees. When their "cold" theory was shaken up, a little of it had to go into partnership with "confinement" to make it stand up, and with a more thorough shaking they both fell to the ground. The same is true of the "confinement" theory put into company with "cold." Our friend, Dr. Tinker, struck out on the "humidity" or "dampness" theory, and one shaking has caused this to stagger up against the "cold," and if we continue the agitation, will they not tumble hand-in-hand?

Now, Mr. Balch's cellar, from whence came the damp and moldy hives all free from dysentery, was kept at a lower temperature than mine; so dry that sack salt would hardly show moisture, as several bee-keepers observed, and from whence came 45 out of 48 colonies dead with dysentery in its worst form, some of them dying within three weeks after being placed in there. Mr. Balch's hives were all damp and moldy *in side*, and neither the hives or the cellar had what bee-keepers at large consider sufficient ventilation to keep the air decently pure.

It seems that Dr. Tinker has a double team too, and while he calls the bacteria and pollen theories my double hobby-horse team, he has one of the bacteria and humidity.

Well, there is no sin in honestly trying to get at the bottom of this great question, each one in his own way; and while I respect the Doctor for his efforts, I find that his team is wonderfully mismated, that is, that the bacteria and humidity theory have no relation to each other, and do not look as much alike as a black Norman and a lemon-colored mustang, and worst of all, the Doctor seems to think it is quite likely that this radical, and ever the same effect, dysentery, has two very unlike causes. This, I do not believe for one moment. I cannot. In the case of my 48 colonies, I had them ventilated some above radically, some in a medium degree, and some but little, many not at all; some in hives 13 cubic inches, and some 13 square and 17 deep, and 9 in the Doctor's 10-frame Langstroth. Every one of which died among the first. The very first one being one of these 10-frame Langstroth hives with medium upward ventilation, and containing an Italian queen, for which I paid Adam Grimm $8.

Now, I do not believe that the shape of the hive, method of ventilation, or the queen of Mr. Grimm had anything to do in causing it, and in this dry cellar, where the mercury never went below the freezing point, and hardly below 44° F., neither or both combined could have produced it. Time after time have not only I, but scores of others had their apiaries terribly reduced by this malady, where neither cold nor dampness were present, nor Mr. Doolittle's long confinement. No; too many of us know that these theories are fallacious. Now, give your bees pure, properly prepared, refined cane sugar syrup in combs containing no bee bread, in such shape that they can reach it readily at all times, and then, if the disease mows down our colonies, as it has been doing, I will agree to run for president of an indignation society, which meets semi-occasionally to expatiate upon our universal ignorance. I have before shown how nearly alike is the pollen and bacteria theories. When producers get the sticky and doubly interesting habit of setting their sections down on the brood frames, I will make every effort possible to see that Dr. Tinker, of New Philadelphia, the introducer of the golden-honey plant, has the great credit that will certainly be due him.

Now, it is my turn to get into the quagmire of not comprehending how lots of top surface and surplus case room can work favorably to the safe wintering of bees, especially as so many bee-keepers have declared against the 10-frame Langstroth hive for this very reason, and further, because most of us still persist in removing our surplus cases at the end of the surplus season, and substituting in its place a box whose top surface room is more than 6,000 cubic inches, and yet the bees will get the dysentery and die. Nearly every year since I adopted the 8-frame Langstroth hive, I have been cursed with some 10-frame hives, and strange to say, they have fallen behind the average of my apiary, in wintering safely.

My opinion is this, bees are more inclined to let alone the nitrogenous food, bee bread, and use only the oxygenized food, honey, when they have the best of facilities to get at their stores at will. If the Doctor can tell us how bees can more readily get access to the adequate amount of food required to winter them, said food being distributed through ten combs instead of eight, then I will not only feel under obligations to him, but will go back and impoverish Mr. George and Katie Grimm, by showing them that their parent's bank stock accumulated from the use of bees in 8-frame hives is all a myth, because it is *now* clearly shown that said hives will not winter bees (though Adam beat all the bee-keepers of this country in safely wintering large numbers of colonies in his), nor are they well suited to surplus storing, though tons are annually coming from their tops, and the change from the 10 to the 8-frame hive is as sure as the trial is made.

I believe I ventured to predict that more than likely disease would catch the Doctor before old age overtook him and soothed him to sleep. I would rather it would be otherwise with all who live, but, alas, it is only the very rare exception. I do not ask, nor expect the readers to place any more confidence in my theories and statistics regarding this wintering problem than they do in my "amazing" little prophecy.

"There is a history in all men's lives,
  Figuring the nature of the times diseased;
The which observed, a man may prophesy,
  With a near aim, of the main chance of things,
As yet not come to life, which in their seeds,
  And weak beginnings, lie untreasured."

Dowagiac, Mich., Oct. 3, 1883.

For the American Bee Journal.

Introducing Queens.

J. E. POND, JR.

From my own experiments, I am led to believe that queens may be introduced safely with far less trouble than is usually taken in the operation. If the conditions are right, queens may be allowed to run into hives without taking any precautions whatever, and will be accepted at once; unless the conditions are right, queens will not be accepted, no matter what precautions are taken.

We all well know that it is a great injury to a colony to be without a laying queen for several days, and if this can be avoided, very substantial gains will be made in the amount of the honey crop. That there is no absolutely safe method of introducing queens as yet discovered, is true; it is also true that it is very difficult to determine when the conditions are such that a queen will be accepted. In my experiments I have taken all these matters into consideration, and find that the occasional loss of a queen, made by introducing her at once when the old one is removed, is more, far more than counter-balanced by the gain in not allowing the colony to remain queenless an hour. I have particular reference to the time when honey is being gathered freely, as that is the time when the loss of a queen is severely felt. In introducing a queen, I now adopt no precautions whatever, except in early spring and fall, but simply remove the old queen, and allow the new one to run into the entrance.

My theory is this: Before removing the old queen, I give the colony a few puffs of smoke to quiet them. The bees at once fill themselves with honey, and are as amiable as one could wish; the bees coming in from the fields are filled with honey also, and the foragers besides are so occupied with their honey gathering propensities that they take no notice of what is going on inside the hives, and as the comb builders and nurses are all very young, they do not molest the new queen, even if they do take any notice of her. My theory may not be correct, but the fact is that I do not lose one queen in 10 by introducing in this manner.

When no honey is being gathered, queens cannot be introduced safely in this way. The old bees remain in the hive, and are terribly vexed at not being able to gather stores, consequently are ready to vent their spite upon any thing that crosses their path. I have, however, in several instances, introduced queens successfully in late fall, by the method advised by Mr. Simmins in the *British Bee Journal*, viz.: removing the old queen, and at once placing the new one upon the same place on the comb the old one was taken from. I am of the opinion that the actions of the new queen have, to a great extent, a bearing upon the matter of whether she is well received or not; if she is scared and runs from the bees, or shows any symptoms of terror, she will be pounced upon at once; otherwise she will hardly be noticed. My reason for allowing queens to run in at the entrance, as mentioned above, is that I think they are not as apt to show signs of fear, or by any acts of theirs cause the bees to see that they are strangers.

Perhaps I may be considered as decidedly heretical, but I have never been fully satisfied that colonies have any scent peculiar to themselves, by which they are enabled to distinguish visitors from members of their own colony. The idea has always seemed to me as somewhat fanciful; more particularly when I see that robbers are recognized before they touch the alighting board, and by their actions rather than by anything peculiar about them. I have often seen sentinel bees "go for" robbers, when they were nearly a foot from the entrance; and I have seen them oftentimes pounce upon a bee at the entrance, and finding it showed no signs of fear, allow it to go peaceably in when one that did show signs of fear (as robbers always do when pounced upon), was ruthless destroyed. This question of peculiar scent is a matter of opinion with me; but is it any more than a matter of opinion with others? If there is any evidence of the fact, if it is a fact, I hope yet to see it, and until I do, shall hold to my present belief.

Foxboro, Mass., Sept. 28, 1883.

☞ We carefully mail the Bee Journal to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Western Bee-Keepers' Convention.

The Western Bee-Keepers' Association met at Independence, Mo., Sept. 20 and 21. The attendance was good, better than at any of the previous meetings of the association, and the first day's session was spent most pleasantly.

The morning passed in arranging the displays of bees, honey, extractors, hives and fixtures, and in a general social manner. At noon, those in attendance, were treated to an excellent repast by the ladies of the association. After dinner the tables were cleared and the association was called to order by its president, Mr. Jas. A. Nelson, Mr. P. Baldwin acting as secretary *pro tem.* The reading of the minutes was deferred until next day.

No preliminary remarks were made, and the association proceeded to the business in hand. The committee on subscriptions to a premium by the citizens reported an amount of $50 subscribed for the best 50 pounds of honey. The committee on premiums offered by the association reported as follows with names of exhibitors:

Class A—Best display of comb and extracted honey, 20 pounds each, $25; W.C.Haraldson and Jonathan George.

Class B—Best 25 pounds of comb honey, $10; W. C. Haroldson, Jonathan George and Miss R. A. Baldwin.

Class C—Best 25 pounds of extracted honey, $10; J. T. Sale, Willie Baldwin, W. C. Haroldson and Jonathan George.

Class D.—Best queen with her bees, $10; W. C. Haroldson and J. H. Fink.

Class E.—Best display of bee fixtures. Scoville & Anderson, Columbus, Kansas.

Those contending for special premium of $50 on exhibit of 50 pounds of honey, are L. W. Baldwin, Jas. Jones and P. Baldwin.

Class G.—Best package of comb honey, one year's subscription to the Independence *Sentinel*, Willie Baldwin.

The report of the committee was followed by the election of officers for the ensuing year, as follows: President, H. Scoville, Columbus, Kansas; Vice-President, G. W. Young, Lexington, Mo.; Secretary, C. M. Crandall, city; Treasurer, P. Baldwin, city.

No further business was transacted at the afternoon session.

Quite a number of the citizens joined the members in making the day's meeting a success. Among those present from other places were, Messrs. J. T. Sales, Jas. Jones and their ladies, of the country; Mr. John Long, of South Missouri; Mr. Jas. A. Nelson, of Wyandotte, Kas; Messrs. G. W. Young and C. F. Lane, of Lexington; Messrs. Scoville and Anderson, of Columbus, Kas., and also Miss Millie Scoville, of Columbus, Kas., who is a guest of Capt. Jas. D. Meador's family.

The second and last day's session of the annual meeting of the Western Bee-Keepers' Association was even more productive of discussion and general interest than the first day. The attendance was larger, and, all in all, the association may be congratulated upon its success at this the second meeting since its organization. The premiums were ample for the meeting, but with the present rate of increase in interest and and endeavors for success will necessarily be larger at the next meeting. More visitors were present yesterday.

On Thursday evening, at 8 o'clock, the association met for discussion with President Scoville in the chair. The evening, which was very satisfactorily spent, was opened by adopting a resolution, offered by Capt. Jas. D. Meador, to present a crate of the premium honey to the *Journal*. This was followed by voting a half crate of the premium honey to the Independence *Sentinel*, and also to the Independence *Progress*.

The President appointed Mr. P. Baldwin committee on statistics, Dr. G. W. Young occupied some little time in addressing the meeting. He was followed by President Scoville with his experience in bee-culture. Raising queens from worker eggs, and his method of swarming bees were the topics. To swarm bees he advised the taking of a small nucleus from each hive and strengthening from the stronger colonies from time to time.

The subject, "What causes comb honey to sweat and run," was discussed by Messrs. P. and L. W. Baldwin, J. D. Meador, G. W. Young, H. Scoville and C. M. Crandall. The conclusion was that it was caused by the bees sealing the honey before it was properly ripened.

Mr. P. Baldwin propounded the question, "What does the worker bee do with the honey when first brought into the hive?" The answering of the question was not fully arrived at, and the discussion was rather animated and engaged in by all the members. The best method of marketing honey was freely discussed by Messrs. Baldwin, Meador, Jones and Young, and was postponed for further discussion until next day.

Friday morning was occupied in a social way. The members took pains to explain all the fixtures and in exhibiting the fine display of honey to the many visitors who called during the day. At 1 o'clock dinner was served as on the previous day, and those in attendance were highly pleased at the efforts of the ladies who prepared the repast.

AFTERNOON SESSION.

President Scoville called the meeting to order shortly before 2 o'clock, and called for reading of the minutes of the previous meeting, which had been deferred. They were read and adopted.

The report of the judge who had awarded the premiums was called for, and read as follows, Mr. Jerome Twitchell, of Kansas City, officiating as judge:

Class A—Best display of comb and extracted honey, to W. C. Haroldson, Buckner, Mo.; premium, $25.

Class B—Best 25 lbs. of comb honey, to Miss Rosina A. Baldwin, Independence; $10.

Class C—Best 25 lbs. of extracted honey, to W. C. Haroldson, Buckner; $10.

Class D—Best queen and bees, J. H. Fink, Independence; $10.

Class E—Best display of bee fixtures, Scoville & Anderson, Columbus, Kas.; $15.

Class F—Special premium No. 1, by merchants of Independence, best 50 lbs. of honey, to Jas. A. Jones, Buckner; premium, $50.

Class G—Special premium No. 2, one year's subscription to the Independence *Sentinel*, Willie Baldwin.

The discussion of the best methods of shipping and marketing honey, followed the awarding of the premiums. It was engaged in by Mr. Jerome Twitchell, of Kansas City, who spoke at length, and was quite interesting, although he, as well as the others, was uncertain as to the best methods.

Mr. Phidel Baldwin, of the committee on statistics, reported as follows. The Table will explain itself:

NAMES.	No. of Colonies in Spring.	No. of Colonies in Fall.	Pounds of Comb Honey.	Pounds of Extract Honey.	Beeswax.
W. C. Haroldson	40	80	2000	150	...
Young & Lane	175	475	3000	500	100
J. H. Fink	3	8	.....	55	...
Elias Ellis	10	20	400	300	5
Jas. T. Lale	12	16	200	500	...
C. M Crandall	57	85	2000	800	25
Scoville & Anderson	135	150	.....	1500	...
L. W. Baldwin	175	230	8750	2750	50
Jas. A. Nelson	54	64	300	3000	25
Jas. D. Meador	20	54	.....	3000	100
Jas. H. Jones	85	110	5400	1200	46
Samuel D. Gregg	20	36	500	1200	50
F. J. Farr	125	150	4800	1500	15
Jonathan George	58	84	2300	1000	20
Phidel Baldwin	125	165	8500	1000	25
W. B. Thorne	18	30	400	900	...
Total	1112	1759	38550	19355	261

Jas. A. Nelson, Wyandott, Kas., and Scoville & Anderson, Columbus, Kas., reported that they were principally in the queen rearing business.

On motion, the President appointed Messrs. Phidel, L. W. Baldwin and Jas. H. Jones a committee on marketing of honey.

At 4 o'clock the second annual meeting of the Western Bee-Keepers' Association adjourned, to meet at a semi-annual meeting on the last Thursday in April, 1884.

C. M. CRANDALL, *Sec.*

H. SCOVILLE, *Pres.*

For the American Bee Journal.

Central Michigan Convention.

The Central Michigan bee keepers held a meeting in the Pioneer room, in the State Capitol building, on Sept. 25; about 20 members were present. President Ashworth occupied the chair. S. Hilbert, of Lansing, was made a member.

In discussing the best methods of wintering, J. M. Harper, who had looked upon the celler, as the best plan, confessed to a change of mind. He found it difficult to secure proper ventilation in the cellar, and would winter a part of his bees in chaff hives; he believed, upon the whole, that there is less risk in wintering in chaff hives than in the cellar.

Prof. Cook thought the entrance to the hive should be nearly closed, at this time of the year, so as to keep the brood from chilling. He also said that a great many of our best bee-keepers are using finer packing, such as timothy, chaff, and very fine sawdust; he did not want oil-cloth over his bees at any time; he also said that in cellar wintering the bees ought not to be taken out before April 5, and, in preparing them for winter, he would take away all the pollen he could.

J. M. Harper thought it time now to prepare for winter.

A. Gregory thought it too early, as there would be danger in not leaving honey enough.

Superintendent I. N. Smith, and Secretary B. B. Baker, of the Central Michigan Agricultural Society, were present, and stated that suitable arrangements had been made for an exhibit of bees, honey and apiarian supplies at the coming Fair.

Prof. Cook recommended an application of ammonia or sal soda for bee stings.

O. Wilson endorsed the ammonia remedy.

On the question of profit, Mr. Hilbert thought bees as profitable as any investment he could make.

W. B. Stone & Co., had a fine display of hives, extractors, smokers, and comb foundation, and stated that they had sold during the season, 150,000 of the all-in-one-piece sections, and about 700 of the Baker hives.

The next meeting of the Association will be held at the same place in Lansing, April 18, 1884.

E. N. WOOD, *Sec.*

Lansing, Mich.

For the American Bee Journal.

Experiments in Introducing Queens.

A. M. HOGLE.

I bought 2 colonies of black bees to manipulate while learning my first lessons in bee-keeping, transferred them to Langstroth hives in May, 1883, which were the first movable frame hives that I ever saw. In June I tried to Italianize them; 48 hours after I put the first Italian queen in the hive, I let her out of the cage, and the natives balled her; I re-caged the queen, but in 24 hours more they had cut under and killed her. The second Italian queen arrived dead; for the third, I selected 5 frames of hatching brood (brushed the old bees off), put them in a new Langstroth hive with my fine queen, and the ants destroyed the queen and colony. The fourth and last queen came in a 3-frame nucleus colony. I have 8 fine queens from her, and 3 queens from my 2 blacks, which make me 1 Italian, 8 hybrids, and 5 black colonies, making 14 colonies in all; increased only 11. My box hive and log gum neighbors have done well. Mr. B. had 4 colonies, increased to 5; Mr. R. 1 colony, and no increase; Col. B. 25 colonies, increased to 26; Mr. M. 1 colony, and no increase; Mrs. R. 2 colonies, and no increase; Mr. G. 23 colonies, increased to 25; Mr. W. 3 colonies, and no increase; spring count, 59; increase, 4. Somd of them are almost persuaded to take the BEE JOURNAL and adopt the Langstroth hive.

Morgan, Texas, Sept. 27, 1883.

For the American Bee Journal.

Bee-Keeping in Bucks County, Pa.

J. E.

I enclose a flower and stem of a weed that grows in our fields at this time of the year, and has several shoots. Yesterday I counted 16 Italian bees working on a bunch at the same time, and the humming of the bees among the flowers of that weed, sounds like it does in May. What is its name? Does it produce honey abundantly, and of what quality? as the bees seem to work on it from early morning until late in the evening.

Bees in this section of the country, as far as I have heard, have done well for the season. The forepart was very wet, the latter part very dry. Surplus comb honey has been taken abundantly, and retails at 25 cents readily; but no extracting is done in this neighborhood, where box hives are mostly used; some have reported an average of 50 pounds to the hive. I cannot report, this season, anything on my apiary, as I have transferred my bees from old hives to movable frames, and introduced bees from the apiary of D. A. Pike, of Smithsburg, Md., and I think they are the best and gentlest bees to handle, and are as good honey-gatherers I ever saw during my 25 years of keeping bees. I procured over 30 pounds from one hive, from May 1, 1883, to June 1, 1883, after turning them upside down.

These last two months being so dry, the bees do not seem to store any surplus from fall flowers, but seem to have plenty of sealed honey in the body of the hive, and take what they gather at present for brood-rearing, as there seems to be more for this month than I have seen in several years, for the same month.

The Italians have not been clear of drones this season; they are flying every day, while the blacks disappeared in July.

Fallsington, Pa.

[It is an aster; it yields honey abundantly, and of fine quality.—ED.]

For the American Bee Journal.

Desiccated Foul Brood.

H. L. JEFFREY.

I send, by mail, a sample of that species of foul brood that I have tried so hard for the past five years to obtain some information about, from other bee-keepers, without any result.

The larvæ turns yellowish brown, and then dries up and leaves a dirty sediment in the cells. My attention was called to it on Monday, Aug. 3.

It is not usually noticed till the colony has all dwindled down. The queen keeps laying in the combs nearly as well as usual, but the third or fourth lot of brood does not mature as much as the preceding ones, and if a comb is taken from the hive and given to healthy colony, every comb will be more or less affected with it in two or three months, and it will spread all through the apiary in one or two seasons, according to the number of colonies. The infection seems to stay in the hives unless they are thoroughly washed inside with salt and vinegar. In 1880 and 1881 I saw 25 colonies in one yard ruined by it. I have known of its ravages since 1878, in different parts of this State. I never have had but three or four hives troubled with it, and those were in an isolated apiary for the purpose of experimenting, but it has shown itself in several apiaries where there has been a large amount of bareheaded brood, during the previous season.

I have been as far as 35 miles, by request, to examine colonies that I have found it in, and found it the cause of the colonies being depleted to a serious extent. I am sure it is as much to be dreaded as the malignant foul brood, because it is not as easily detected in its first stages, and for that reason it easily and surely gets the upper hands of the novice, and its ravages get a good foot hold.

Please to examine the specimen as closely as possible, and call the attention of the best informed apiarists to the subject. I am ready to give all the information I possess on the subject, and would like the opinion of others. Perhaps if the specimen was examined by some competent apiarists, it would be more thoroughly investigated.

Washington Depot, Ct.

[We have had no experience with foul brood in any form, but will try to get the opinion of those who have, at the Convention here next week.—Ed.]

For the American Bee Journal.

Bees Injured by Heat, etc.

J. D. ENAS.

Under the heading of "Bees Injured by heat," Mr. M. Bragg seems to think that my bees suffered from not being properly shaded. Most of my hives are not shaded, though I am not opposed to shade for hives; I have planted some trees for that purpose, and have used the live oak for shade, but do not observe any difference in the result. When bees cluster at the entrance, I find out the reason at once, and attend to it.

My hives are the Muth-Langstroth, with false ends, for the frames in the second story, which gives an air space at the ends of frames, and prevents the combs from melting, and the over-heating of the brood. It is a long time since I had any combs to melt from heat. I use a piece of burlap on the top of the frames, which absorbs moisture, and keeps the top of the hive cool in warm days. I also raise the top and also the hive from the bottom board, if needed.

On the last of December, 1882, we had a down-East snow storm; snow was six inches deep on a level, with frost in the evening. Previous to that our season was warm, and fruit buds were nearly in bloom. One could see the pink lining to the cherry buds. Many of our fall and winter flowers were in bloom; even blue sage, which was killed by the snow and subsequent frost. The snow did not last 48 hours. The Manzanita, which was in full bloom, was cut short. Fruit buds that were about to burst were checked, and none too soon, for every thing would have been killed. All tender plants were killed to the ground; even the live oaks shed their leaves, some entirely, which is unusual, and which I have not seen before, during a residence of more than 31 years in this State.

In February again, during a warm spell, the Sage bloomed, to be again caught by frost, which checked the rearing of brood. Having plenty of combs of sealed honey, I uncapped it and gave it when it was most needed. We had a good many cool and sudden showers until May, when the bees were booming again, though the weather was very bad for queen rearing most of the spring, as it seemed to rain just when one expected a lot of queen cells to hatch, or a lot of young queens to be fertilized.

Early in June we had north winds which dried up vegetation, injured the bloom and young fruit, and put another check on the honey flow, and the effect was felt the balance of the season throughout the State.

Our climate is not the same as at Mr. Bragg's place, which is probably 100 miles, or so, further south. The highest marked by the thermometer was 102°, and that for one day only. That was the only time that the bees left the combs; but by raising the hive from the bottom board, they soon went inside. I used the entrance of the whole width of the front of the hive. I am of the same opinion as Mr. Bragg, that a double-walled hive will suit this climate. I think the dead-air space an improvement, to guard against over-heating.

Queens stopped laying from 4 to 6 weeks, but are building up, at the present. I had to feed 100 pounds of sugar. They are doing better now, and prospering. The frost stopped the supply of pollen.

At the time my bees were getting reduced, they did not seem to be bringing in pollen, and by feeding them honey liquefied, I induced robbing more than I cared for (although I had a bee tent). After using all means to stop robbing without success, I made a lower story to the hive, only 1½ inches high, well ventilated with double-wire cloth over the ventilators, with a trap for entrance, so that the bees could go in, but not get out. I set the hive on that, and closed all the openings except the entrance.

I had a hole one-half way up, in front of the hive, and closed with a plug. When the robbers were very thick at the entrance, I opened the upper hole, and they would stream in, in a solid body; when most were in, I closed the hole. In this way I got a strong colony. I then placed an empty hive on the stand, and removed the hive with bees, shaded them for several days, and put them on their stands after dark. The next morning they were ready to defend what they had before robbed. I think the other hives were more than the loser. This is the worst season I have seen since 1877.

Napa, Cal., Sept. 17, 1883.

For the American Bee Journal.

Ohio Convention.

The Ohio Bee-Keepers' Association held a meeting at Columbus, O., from Sept. 3d to 7th inclusive, during the Ohio State Fair, at which time several questions of importance were discussed, among which was the subject of Queen Rearing and Management, by A. Benedict, of Benington, O.

Also by S. D. Riegel, of Adelphi, O., on Rearing Queens from Larvæ, Rearing Queens in Small Nuclei, and Putting Queens with Swarms at Swarming Time, etc.

A question was asked and not satisfactorily answered, Will a Colony Swarm without Drones?

Many other questions of importance were discussed.

An interesting lecture was delivered by Dr. Besse, of Delaware, O.

I must not close this report without thanking the Ohio State Board of Agriculture for the interest they have taken in the advancement of bee-culture, by the liberal premiums paid, and suitable buildings provided for the display of honey and all kinds of bee appliances, of which there was a very good display by Dr. Besse, S. D. Riegel, A. Benedict, Mr, Drum and many others.

The meeting adjourned to meet some time during the winter, of which due notice will be given.

C. M. Kingsbury, *Sec.*

☞ The fall meeting of the New Jersey and Eastern Bee-Keepers' Association will be held in the city of New York, at the Cooper Union, on Wednesday, Nov. 7, 1883.

J. Hasbrouck, *Sec.*

Bound Brook, N. J.

☞ The Lorain County Bee-Keepers' Association will meet at Oberlin, Ohio, on the last Tuesday in October, 30th. O. J. Terrell, *Sec.*

Advertisements intended for the Bee Journal must reach this office by Saturday of the previous week.

☞ Do not let your numbers of the Bee Journal for 1883 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

☞ If I understand correctly, this department is not expected to occupy very much of each number of the Weekly. It is, in my judgment, intended to be filled with these questions, that are of such a nature that short answers may be full and comprehensive. There is an old adage that makes the following new one true. A moment may ask questions that hours cannot answer. For instance, "A Friend's" first question is exactly adapted to the department. His second will do.

Mr. Tongue's, in my opinion, is out of place here. It would take a long and comprehensive article for me to reply to it satisfactorally to Mr. T., and then some one else would call it all moonshine.

None but the author should dictate the subject for articles. Articles to be of most value, should have some inspiration about them. Inspiration (excelerated circulation), will not bear dictation.

How is this, Mr. Editor, am I not correct? You made this department, and had it all before my eyes, in print, before I dreamed of such a thing.

J. H.

[Mr. Heddon is quite correct. The department was intended for terse replies, of general interest, and not for a special description of articles, used by Mr. Heddon, or for captious questions regarding any of his "hobbies," for every man has more or less of them.—Ed.]

Spaces Between Tiers of Sections.

Will Mr Heddon please answer? 1. How much space do you allow between the tiers of sectiens in your case?

2. About what per cent. of your sections can you get straight enough to glass?

A Friend.

Answers.—1. Scant ⅜ of an inch.

2. Without separators, we can get 5-6 of our sections straight enough to glass, if we glass them on the outside of the wide pieces, *a la* Moore; but if on the outside of the narrow pieces, and within the wide side pieces, then only a small portion, and were I bound to glass my sections in this style (prize), I should use separators.

How to Successfully Winter Bees.

Will Mr. Heddon please tell how to winter bees successfully in the "What and How." It will be a favor thankfully received. Please give *modus operandi* in detail. L. N. Tongue.

Hillsborough, Wis., Sept. 22, 1883.

Answer.—While I appreciate the fact that Mr. Tongue values my knowledge of the wintering problem, I wish to say that the best I can do for him now, is to refer him to my illustrated article in one of the October numbers of the Weekly for 1882. I am now making some extensive experiments in wintering, but of these cannot report much yet.

Sections and Cases.

Will Mr. Heddon please answer the following question in the Bee Journal:

1. Is your section 2 inches wide or 1¾ inches?
2. How is the Heddon section case made?
3. Can the section be glassed as easily as if separators were used?

J. F. Sellers.

Reynolds, Ill., Sept. 11, 1883.

Answer.—1. We are this year experimenting with sections 1½, 1¾ and 2 inches wide; they please us just in proportion to their width—preference being for the narrowest.

2. Our case is a shallow box, with open top and bottom, 4⅝ high, of the length and breadth of the hive they are to be used on, with partitions and a tin strip on the bottom to support the sections. The minutia is out of place here, and you should not attempt to make any number without a sample.

3. The sections cannot be glassed as readily as those built between separators.

SELECTIONS FROM OUR LETTER BOX

Best Honey Season for Years.

We have not had time to take off all our honey yet. There are at least 2,000 pounds yet in the hives. We have had the best season for honey that we have had for some years. Bees are now working briskly. Our bees will be in splendid condition for winter quarters.

S. Valentine & Son.

Hagerstown, Md., Sept. 28, 1883.

Fall Honey in Texas.

We have had a very good rain down here, and grass has started up. The bees are doing very little, working on scattering wild flowers.

M. C. Granberry.

Austin, Texas, Sept. 30, 1883.

Good Qualities in Bees.

On page 480, I noticed the following list of qualities which should be sought in bees: 1. Good honey gatherers. 2. Hardy to winter. 3. Easy to handle. 4. Yellow bands. Please tell us of what value is the fourth requisite to these perfect bees. It seems to us that to the three first qualities should be added, good comb builders, and the instinct to protect themselves from robbers, moths, etc. There may be many other valuable qualities, such as prolificness, but we can see no possible use of "yellow bands." Had the writer said "iron bands," we might have thought he wanted them to keep the over-loaded bees from bursting. If these "yellow bands" are something of that kind, we hope the phenomenon will be explained. John King.

Fowler, Ohio, Sept. 28, 1883.

[The remarks about "iron bands" are, of course, simply "*irony*"—nothing more.

Yellow bands merely add to the *beauty* of the bees; and, though this is always a welcome feature, the qualities named above, for comb building, prolificness, etc., are more essential.—Ed.]

Those Large Yields.

Please ask, through the Bee Journal, of those giving large yields from one colony, to give a description of their hive, the surplus honey, kind of bees, if doubled in the spring, how much, whether fed or not, if fed, when and how much; also the treatment from Nov. 1, 1882, to the time of their report. T. J. Tiffany.

Brooklyn, Pa., Sept. 30, 1883.

Asters as Honey Plants.

I send a sample of one of our honey plants, and would like for Prof. Cook to give us the name of it through the Bee Journal. It generally grows about 4 feet high, and sometimes 6 feet. It has been in bloom ever since Sept. 1, but it is about out now. The bees have worked on it splendidly, and stored a nice lot of honey, putting them in fine condition for winter.

A. R. Nisbet.

Dobyville, Ark., Sept. 29, 1883.

[It is one of the innumerable asters, which are among our most excellent honey plants. The honey is also of excellent quality.—A. J. Cook.]

Satisfied with Honey Crop.

I have just taken off the last honey of the season, and put my bees into winter quarters by putting a large chaff cushion in my chaff hives, as I remove my crates. It may seem a little early, but my experience is, that it does not hurt them to have plenty of time to arrange for their "long winter nap." I found an unusual amount of brood and honey in the brood-chamber, for the time of year. Our fall honey was cut short by the drouth and early frosts, but my season's report is as follows, and I am satisfied: Spring count, 35 colonies; in winter quarters, 57 colonies; comb honey, 2,008 lbs.; extracted honey, 1,114 lbs.; total, 3,122 lbs. I hope to be able to attend the Chicago Convention.

GEO. E. HILTON.
Fremont, Mich., Oct. 3, 1883.

Fall Honey from the Asters.

Please find enclosed a flower that is just in full bloom now. It has been in bloom for about ten days; the frost does not seem to injure it. Bees are working on it very lively, and they are storing honey in good style yet. Please give it a name through your welcome BEE JOURNAL.

D. B. BROWN.
Des Moines, Iowa, Sept. 27, 1883.

[It is one of the asters—all are excellent honey producers.—ED.]

Bee and Honey Exhibit.

We had quite a nice honey exhibit at the Portage County Fair. Mr. Page, of Streetsborough, and Mr. Converse, of Ravenna, were the exhibitors. Mr. Page had a tent made of wire screen covering his bees. Mr. Converse took out the side of his hive and put in glass, so that they could see the bees. He took the prize for a hive; also, on the best colony of bees; also on some honey.

B. HARDING.
Kent, Ohio, Oct. 1, 1883.

Bee Killer.

I send a specimen of fly caught with a bee in its forceps. They are exceedingly swift on the wing, and cannot be kept sight of more than a couple of rods away. Are they the "bee killers" spoken of in the BEE JOURNAL?

JAS. POINDEXTER.
Bloomington, Ill.

[Yes; it is the *Asilus Missouriensis*, or bee killer.—ED.]

☞ The sixth annual meeting of the Northern Michigan Bee-Keepers' Association will be held at Stone's Opera Hall, Sheridan, Montcalm county, Mich., on Tuesday and Wednesday, Oct. 9 and 10, to open at 10 a. m. of the first day. Evening sessions will be held, which will be interesting. At our last meeting it was requested that all interested in apiculture attend, and all who would, and could, furnish for exhibition apiarian supplies in the way of hives, extractors, implements used in the apiary, honey, honey-producing plants, and anything that would be interesting to a bee-keeper. Ample arrangements have been made to entertain all who will come. Let us have a general turn out, and see what we can learn one of the other. It will be a dull scholar who cannot profit by such a gathering. Feel assured we shall have an interesting time.

GEO. W. STANTON, *Pres.*
O. R. GOODNO, *Sec.*

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

How to Create a Market for Honey.

We have now published another edition of the pamphlet on "Honey as Food and Medicine," with more *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy **5** cents, postpaid; per dozen, **40** cents; per hundred, **$2.50.** 500 will be sent postpaid for **$10.00**, or 1,000 for **$15.00**. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit. Try it, and you will be surprised.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a statement of account every week.

Trial Trip—25 Cents.

As the season for Fairs has arrived, and wishing to be able to reach several thousands of the old-fashioned bee-men, and by the aid of the BEE JOURNAL to lift them up to higher ground, adopting newer methods and progressive ideas, we make the following very liberal offer: We will send the Weekly BEE JOURNAL till Dec. 31, *on trial, for 25 cents.* In order to pay for getting up Clubs, we will give a copy of Fisher's Grain Tables, or Scribner's Lumber and Log Book, to any one who will send us five trial subscriptions (with $1.25); for a club of *ten* we will give a cloth copy of Bees and Honey; for a club of 15, a cloth copy of the 7th edition of Cook's Manual of the Apiary; for a club of 25, we will present both the Manual and Bees and Honey. If any one wants these Books for nothing, here is an excellent opportunity to get them for a little exertion.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey* at Fairs, will sell almost a fabulous quantity of it.

Our Premiums for Clubs.

Any one sending us a club of **two** subscribers for 1 year, for the Weekly, with **$4**, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For **three** subscribers, with **$6**, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For **four** subscribers, with **$8**, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For **five** subscribers, with **$10**, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

◆

Preparation of Honey for the Market, including the production and care of both comb and extracted honey Instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

◆

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

◆

Books at Fairs.—Those who make an exhibit at Fairs will find that an assortment of Books and Pamphlets would sell and leave them a profit for handling. We will send such, postage prepaid, at 25 per cent. discount; or if the purchaser pays express charges, we will supply any of our own publications at 40 per cent. discount.

◆

☞ The new two cent rate of postage for letters went into effect on October 1. Three cent postage stamps will now be but little used. For all fractions of a dollar sent to us hereafter we should prefer either *one-cent*, or else five or ten-cent postage stamps, or a Postal Note. Do not send coins in any letter.

◆

Fairs.—To any one exhibiting at Fairs, we will send samples of the BEE JOURNAL and a colored Poster, to aid in getting up a club. The Premiums we offer will pay them for so doing. For a club of 8 subscribers to the Monthly BEE JOURNAL, or 4 Weekly, we will present Dzierzon's Rational Bee-Keeping, price $2.00.

☞ May we ask you, dear reader, to speak a good word for the BEE JOURNAL to neighbors who keep bees, and send on *at least one new* subscription with your own? Our premium, "Bees and Honey," in cloth, for one *new* subscriber to the Weekly, or two for the Monthly, besides your own subscription to either edition, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

CHOICE ITALIAN QUEENS!

Breed for BUSINESS and Beauty!

Daughters of prolific and fine-colored mothers. producing large and beautiful drones and workers,

Tested Queens, selected with care, each......	$2 00
Untested " choice in color and size, each,	1 00
Nucleus of 2-Langs. frames and tested Queen	4 50
Additional frames, each	50

If you want the BEST, send your orders for **Queens and Bees** to

JAMES E. WHITE,
9Btf ENGLEWOOD, Cook Co., ILL.

BOND & PEARCH,
(ESTABLISHED 1860.)
163 South Water St., CHICAGO,
COMMISSION MERCHANTS,
Make a Specialty in HONEY.

Consignments solicited. Will make liberal advances on shipments. Refer to Hide and Leather National Bank. 10Btf

Sweet Clover
AND OTHER SEEDS.

Having a large stock of the new crop of Sweet Clover Seed, I can fill orders at **30c.** per pound **$4** per peck, or **$15** per bushel.

Also, all other SEEDS for HONEY PLANTS,
ALFRED H. NEWMAN,
923 West Madison Street, Chicago, Ill.

Established 1857.
BAKER & CO.
Satisfaction Guaranteed
DESIGNERS AND
ENGRAVERS ON WOOD
CORNER OF
CLARK & MONROE STS.
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DEALERS IN
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THE BRITISH BEE JOURNAL
AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published monthly, and contains the best practical information for the time being, showing what to do, and when and how to do it. **Rev. H. R. PEEL, Editor.**

We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal*, both for $3.00 a year.

BARNES' PATENT
Foot Power Machinery
CIRCULAR AND
SCROLL SAWS,

Hand, Circular Rip Saws for general heavy and light ripping, Lathes, &c. These machines are especially adapted to **Hive Making.** It will pay every bee-keeper to send for our 48-page Illustrated Catalogue.

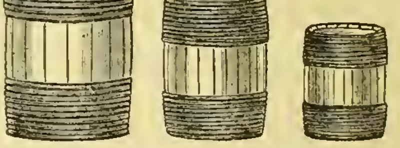
W. F. & JOHN BARNES,
No. 2017 Main street,
Rockford, Winnebago Co., Ill.

KEGS AND PAILS
FOR EXTRACTED HONEY.

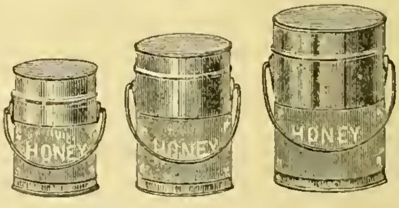
These KEGS are designed to answer the popular demand for honey in small packages, and when compared with large barrels holding from 300 to 500 lbs. each, they are fully as cheap and often cheaper. They need no waxing, but should simply be thoroughly scalded with boiling water before used. The leakage so often occurring in the large hard-wood barrels can be entirely prevented by using this size of packages. Considering the cost and trouble of waxing, the loss of honey by leakage, and the ease with which these Kegs can be handled and shipped, with an actual saving in original cost, it is apparent to all that they are the best. Prices:

5 gallon Kegs, holding a trifle over	50 lbs....	40c
10 " " " " "	100 lbs....	60c
18 " " " " "	190 lbs....	80c

When 25 or more kegs are ordered at one time, a discount of 10 per cent. given on the above prices.



These new kegs are designed and manufactured with special reference to my experience and suggestions from those who have used the fish, lard and syrup kegs of last season. The staves are Norway Pine; the heads are Oak; and the hoops are Hickory, and, as will be noticed by the accompanying illustrations, they are well bound. If the heads are painted, I will guarantee these kegs not to leak. It is not essential to paint them, but I believe it will pay to do so.



These PAILS have a full cover and are excellent for selling honey in a home market, and after the honey is candied, they can be shipped anywhere. All sizes, except the smallest, have a bail or handle, and when emptied by the consumer will be found useful in every household.

Assorted samples of the four sizes put inside of one another as a nest, price, 50 cts. by express. The following are the prices in quantities:

				Per doz.	Per 100.
Gallon, holding	10	lbs. of	honey...	$1.80...	$12.00
Half Gal., "	5	"	" ...	1.50...	9.00
Quart, "	2½	"	" ...	1.20...	7.00
Pint, "	1¼	"	" ...	.75...	4.00

ALFRED H. NEWMAN,
923 West Madison Street, CHICAGO, ILL.

BEES Send to Chicago, Ill., for sample of AMERICAN BEE JOURNAL Monthly, $1 a year. Weekly, $2.

THIS PAPER may be found on file at Geo. P. Rowell & Co.'s Newspaper Advertising Bureau (10 Spruce St.), where advertising contracts may be made for it in NEW YORK.

OLDEST BEE PAPER IN AMERICA
THE AMERICAN BEE JOURNAL
ESTABLISHED IN 1861

VOL. XIX. CHICAGO, ILL., OCTOBER 17, 1883. No. 42.

Published every Wednesday, by
THOMAS G. NEWMAN,
Editor and Proprietor,

Honey Producing Plants.

Speaking of the apiarian exhibit of the Michigan State Fair, the *Country Gentleman* says:

One of the most interesting features of the exhibition, was a collection of honey-producing plants, pressed and mounted by C. M. Weed, a student at the Agricultural College. So well was the work done that the natural colors of the flowers were perfectly preserved. There were more than 50 specimens.

We have purchased the whole collection, and have them bound in a volume and placed in the Bee Journal Museum, for the convenience of visitors.

* * *

☞ We have received a copy of a new Bee Book, in German, by C. J. H. Gravenhorst, of Germany. It is published at 5 marks ($1.25), by C. A. Schwetschke & Son, Braunschweig, Germany, and contains 250 large octavo illustrated pages. Mr. Gravenhorst is one of the most progressive of German apiarists, and his articles have been published in the American Bee Journal from time to time, on all the most interesting topics of the day.

* * *

Alley's New Feeder.—We have received one of these new bee feeders, and placed in the Museum. It is new, novel, and thoroughly practical.

* * *

☞ Our honey-producers who have an eye upon a European market for honey, will be pleased to learn that several late shipments of comb honey from this country to Europe has resulted successfully.

Honey at the Indiana State Fair.

The Indiana *Farmer* has the following concerning the honey exhibit at the recent State Fair:

While the honey show at the State Fair was creditable to those who made the exhibit, nevertheless, it was a disgrace to the bee-keepers of Indiana; especially so after the bounteous yield of the past season. Several parties had written us to the effect that they would make a display of apiarian products, but failed at the eleventh hour. Yet it may be taken as a sign of encouragement that we were not permitted to walkaway with the entire list of premiums.

Mr. A. Cox, of White Lick, Ind., did himself credit, securing first premium on comb honey in the most marketable shape, also on best display of honey from one apiary, and second premium on retail packages of extracted honey.

Mrs. Cox carried off the red ribbon for the best honey cake, while visiting bee-keepers carried off the cake; we can testify, from personal knowledge, that it was very eatable.

J. Hutchinson, of Worthington, Ind., showed some nice honey, the shape, however, being objectionable on account of the size of the boxes.

In the ladies' department, Mrs. Brown, of this city, secured the first on comb honey, and Mrs. Robbins second on extracted.

* * *

☞ The Northwestern *Farmer* says that Mr. H. K. Beecham, of Acme, Mich., commenced the season with 40 colonies of bees, increased to 57, and took from them 4,000 pounds of honey, 700 pounds of which was comb honey. One colony gave 170 pounds of well ripened extracted honey, and another 70 pounds of comb honey.

* * *

☞ Honey that will not candy is to my mind very dangerous for winter stores, as my experience proves. If your combs are filled with honey from honey dew, it will pay to extract it all and feed sugar syrup. As the extracted honey can be fed in the late spring and summer months for brood-rearing with impunity, there will be no loss of honey.—*Indiana Farmer.*

Died, at Augusta, Wis., Oct. 4, 1883, after a long and lingering illness, Lovina, wife of Dr. D. C. Spencer, aged 50 years. A life-long earnest Chistian, a devoted wife and mother; "her end was peace."

The above notice is sent us for the Bee Journal. Mrs. Spencer was for several years a successful and progressive apiarist, and many who attended the National Convention in Chicago, in 1879, as well as several other meetings, and formed her acquaintance, will receive the intelligence with profound sorrow, and will join us in condolence with Dr. Spencer in his sad bereavement.

* * *

☞ The Chicago *Western Rural* has been enlarged to nearly double its former size. This improvement in the *Rural* which evidently places it at the head of any other paper of its kind in this or any other country, is only indicative of the rapid development of our agricultural and live stock interests.

* * *

☞ T. B. Peterson & Brothers, Philadelphia, Pa., publish this day "Guy Mannering," being the *Third Volume* of their new and cheap edition of "The Waverley Novels," by Sir Walter Scott, which will be completed in Twenty-six Weekly Volumes, each volume being a novel complete in itself, and one volume will be issued every Saturday until the whole are published. Price 15 cts.

* * *

New Catalogues.—We have received the following: Catalogue for 1883-84 of Pleasant Valley Nurseries of John S. Collins, Moorestown. N. J.

D. A. Jones, Beeton, Ont., Circular and Price List containing a revised essay on the wintering of bees.

Annual Catalogue of the State Agricultural College of Michigan, at Lansing.

Price List of the Fruit-Land Nursery of T. J. Ward, St. Mary's, Vigo County, Ind.

Bee-Keeping on this Continent.

In the Toronto *Globe* for Sept. 28, we notice the following editorial article on the recent North American Bee-Keepers' Convention in that city:

At the recent meeting there were representatives from the extreme points of the "sunny South" and the "frozen North." Florida and Manitoba were in conclave over the question of honey-production. In the bounty of nature, all over this broad continent there flows, in greater or less profusion, the luscious nectar of flowers, which only awaits the labors of the "busy bee," to be utilized for the service of man. Although Southern bee-keepers have some advantages over their Northern brethren, especially in the matter of wintering bees, yet, strange to say, in the honey yield the North excels the South. As though Providence would infuse extra sweetness into the lot of those who are subjected to the rigors of our northern winters, it is in these higher latitudes that the largest crops of honey are taken, and Canada, though pictured by many in more southern climes as a region of snow and ice, is the banner country of the world as to the production of honey.

One has only to survey such an exhibit of honey as was presented at the Toronto Industrial Exhibition, to realize the possibilities of bee-culture in this and other countries. The display which has been made comprised about $30,000 worth of honey. If every county throughout Canada were made to yield say $10,000 worth of honey annually, it is easy to see that an addition of one or two million dollars would thus be made to the national revenue. This is an exceedingly modest and moderate calculation, because there is hardly a county in the Dominion that is not capable of yielding ten times that amount of honey.

It would appear from the statements made at the recent Convention, that what is needed in order to harvest the vast honey crop which is going to waste year after year in this and in other countries, is a sufficient number of properly qualified bee-keepers. Bee-keeping is like other occupations, aptitude and education are essential to success in it. Persons unfamiliar with bee-keeping, will doubtless have been astonished on reading the reported proceedings of the recent Convention, to find how many details enter into the business, and what a large amount of skill is needed in order to its successful prosecution.

The necessity of a thorough education in bee-culture of those naturally adaped to it was a prominent point brought out at the recent convention, and the best way and means of securing it were thoroughly discussed. As the outcome of these discussions it was resolved that the time has fully come for the claims of bee-culture to be recognized by its being taught in all the agricultural colleges throughout North America. The Michigan Agricultural College is the only one in the United States that has a professor of apiculture. Prof. Cook, who ably fills that office, was present at the meeting which has just closed, and added greatly to the interest of the occasion. He has, the present year, a class of 40 students, and were every other agricultural college on the North American Continent to follow the example set by Michigan, a large army of bee-keepers would be in training for this important rural industry.

It may be stated that instruction in apiculture was contemplated by the founders of the Ontario Agricultural College in the original plan of that institution. It was provided in the programme of study that "there should be a bird and bee department," and without doubt it might be made a very valuable and useful one. The Ontario Bee-Keepers' Association, it is understood, intend to urge this matter on the attention of the Government, and we trust it may be found practicable to comply with their wish, and thus make our Agricultural College in this, as it is in most other respects, the peer of the one in the adjacent State of Michigan.

To the Bee-Keepers of Kentucky.

We are requested to publish the following Circular, a copy of which Dr. N. P. Allen will send to any one who will fill out the blanks and return to him:

We were appointed a committee by the Kentucky Bee-Keepers Association, which met at Louisville, August 29 and 30, to collect information in regard to bee-culture and honey production in Kentucky, the ultimate object being the development of the honey resources of the State, and the best location for apiaries.—N. P. Allen, W. C. Pelham, J. T. Conley.

Every bee-keeper is requested by the Committee to fill out the following blanks, and forward the same to me at Smith's Grove, Ky.

N. P. Allen, *Chairman Com.*

Kind of Hives used and kind of Bees
No. of Colonies
No. of Swarms
No. lbs. Comb Honey
No. lbs. Extracted Honey
Price Comb Honey sold
Price Extracted Honey Sold
When Marketed
Give name of Flowers from which Crop of honey is gathered
Fruit blossoms
Black Locust
Poplar
White Clover
Red Clover
Linden
Smart Weed
Golden Rod
Aster
Other Sources
Remarks
Beginning of honey flow
Length of honey flow
Remarks

Signature
Address.

Seasonable Hints.

Prof. A. J. Cook gives the following on feeding and preparing bees for winter, in the *Rural New Yorker* of last week:

The bees should now be prepared at once for winter. If not already done, we should see to it at once that every colony has at least 30 lbs. of capped stores. If to secure this we need to feed, it is just as well to feed granulated sugar syrup as to feed honey. If feeding is necessary, let it be done at once, so that the bees may get it capped over before it is too cold to do it. I have found by actual experiment that bees do better when the pollen is mostly excluded from the hives, and so would advise that frames containing much pollen be left out of the hive. They will be very valuable if returned when breeding commences next spring.

Let all see, too, that only as many frames are left in the hive as the bees will cover. Use a division-board, or two division-boards, so as to make the chamber for the bees only large enough to contain these frames. All these frames should be covered by a piece of factory cloth, and this by an ample sack of chaff or dry sawdust, which may come well down over the division-boards. It may be thought that repetition in these matters is the order of the day; but it is called for, as neglect in these points is the rock on which many—and some of them our ablest bee-keepers—split.

In working with our bees at this season, after gathering is over, we can hardly fail to observe two things—first, the propensity of the bees to rob; and secondly, the even greater tendency to sting. To prevent robbing, we should handle the bees no more than is absolutely necessary; we should leave no honey where they can get at it, and if we see that any colony is being robbed, we should close the entrance so that only one or two bees can pass at a time. The last precaution is also wise, as during the cold nights of October less heat will escape.

Newspapers in America.

☞ For seven years past Edwin Alden & Bro., Cincinnati, Ohio, have issued annually their *American Newspaper Catalogue*, but never duplicated it.

To secure accuracy and reliability they have corresponded directly and through agents with every accessible Editor, Publisher and Post-master in the United States and Canadas.

The number of newspapers and magazines published in the United States and the Canadas as herein catalogued is 13,273 (an increase over the number last year of 1,115). Total, in the United States, 12,607; in the Canadas, 666.

CORRESPONDENCE

For the American Bee Journal.

Sending Queens by Mail.

G. M. DOOLITTLE.

Having had considerable experience this season in sending queens by mail, as I have sent out several hundred without loss (with a single exception, and that being chargable to an accident occurring before the queen left my place), I thought perhaps the readers of the BEE JOURNAL might be interested in a description of the cages used, and the mode of making the food for the bees during the journey.

The cage is a block of soft wood, either pine or basswood, three inches long by two wide by 1¼ thick; 5-16 of an inch from one end is bored a ¾ inch hole, going nearly through the block the 2-inch way, and 5-16 of an inch from the other end is bored a 1½ inch hole, going nearly through the block the 1¼ way, which brings the two holes within 1-16 of an inch of each other. By having the holes run through the block from two different sides, the block has more strength than it otherwise would, and it also gives room for nearly double the feed in the ¾ inch hole, which could be got in a hole running the same way as the 1½ inch hole does.

Into the ¾ inch hole is poured melted beeswax, so as to coat the wood with wax, and thus prevent the moisture being absorbed from the candy. After being waxed, a ⅜ inch hole is cut so as to join the two auger holes, for a passage-way for the bees to their food, which is to be placed in the ¾ inch hole. After the food is in the hole, a cork made of pine ¾ inch in diameter by ⅛ thick, cut by a punch which can be purchased at any gun store, is driven in, after being previously dipped in melted wax. Thus we have, as it were, a minature barrel, full of food, and the bees are admitted thereto through the bung hole. The wax-coating allows no moisture to escape, and the form of the hole and the way the bees are admitted, keeps the food in place, so that it cannot possibly get loose and kill the bees. Over the 1½ inch hole is placed a 1⅞ inch square piece of wire cloth, which is nailed down after the queen and bees are in. Next, a piece of a section honey box, 3 inches long, by 2 wide, by 3-16 thick (having for ventilation a ⅜ inch hole bored in it so as to come directly over the 1½ inch hole), is nailed over the side of the block having the wire cloth on it, and we have our cage completed.

The candy is very easily made, and will keep moist and in good condition in the above described cage, for a year at least. Take about 2 lbs. of pulverized sugar, which can be obtained at any grocery story, and put it into an ordinary tin pan; make a little hollow in the sugar and put therein 3 tablespoonfuls of good, clover or basswood honey. Now mix with the spoon till it gets quite thick, when the spoon is laid aside and the batter is kneaded, as a woman would knead dough for bread. This kneading is kept up till you can roll the candy in your hands, as boys roll snowballs. When it is so hard that it will retain its round shape when placed on a flat surface, except to flatten somewhat on the underside, it is ready for use.

To put it in the hole in the cage, get a stick ⅝ in diameter, and pound it in (keeping your finger over the feed hole), till the barrel is full, lacking ⅛ inch. Now drive in your waxed pine cork, and you have it secure. In driving in the cork, I generally use a clamp on the cage to prevent the splitting of it, as the wax on the cork and that on the hole makes it go in rather snug, as it should do.

With this food and the cages above described, I have sent queens safely to Texas, California and Oregon, as well as to nearly all the other states in the United States. The postage required is but 2 cents.

Sometime last February, Mr. Cameron, of Scotland, wrote me to send him one of my best queens by mail, if I was willing to try the experiment, sometime during the summer. I replied that I would do so, although I had little faith that I could get a queen to him by mail alive. Accordingly, on Aug. 1, I made a cage twice as long as the one described above, of a block 2 inches square. Instead of using a ¾ inch feed hole as in the above cage, I used two 1 inch in diameter (one at each end) and bored two 1½ inch holes in the center so they cut together, which gave a larger bee apartment. This cage gave room for nearly four times as much candy as the other, so I placed with the queen 25 worker bees as attendants, instead of 10, as I usually do in the other cages.

The bees and queen were placed in the cage at 11 a. m., Aug. 1, and the cage placed, wire cloth down, on two ⅛ strips, being thus left till the next morning, so that the queen could rid herself of eggs, and the workers clean out the cage of anything therein which they may dislike.

In selecting bees to send with a queen, I take those as near to 6 or 8 days old as I can, and catch them as they are filling themselves with honey, waiting till they have their honey sacs nearly full. Having tried bees of various ages together with those which have not filled themselves with honey, I find that such bees give the best result.

But to return: At 6 a. m., Aug. 2, I nailed the cover over the face of the cage, wrapped it up in strong manilla paper, except the two ⅜ holes (one over each of the 1½ inch holes), tied it up with good strong twine, and tied thereto a tag bearing the address. As queens are not supposed to go in the foreign mails, I took the precaution to register the package, so as to be sure it should be forwarded after it left the confines of the U. S. At 7 a. m., her majesty started for her home in the old world. On the evening of Sept. 4, I received the following letter:

BLAIR ATHOLE, SCOTLAND, Aug. 18, 1883.—"You have done it, my friend; you have done it! Shortly after 8, on the morning of the 16th inst., I received the package containing the queen bee. You may be sure I very quickly peered inside, and as quickly had the satisfaction of seeing probably the first 'live queen that ever crossed the Atlantic.' I delayed as little as possible before I opened the cage or royal palace, for such it seemed to be—clean, sweet, and in perfect order. On opening, I found the queen in splendid trim, and so was her attendant bees. Two only of the bees were dead. The candy was not half eaten, and it had kept its place in the cage. No spots of dysentery; in short, everything was first-class. This morning, while I held the frame in my hand, I saw her deposit eggs. Success to her. With kindest regards and many thanks for sending her majesty, I am yours, etc.,

ANGUS CAMERON."

I have given the above with the hope that the plan may be so improved upon, and our postal laws so arranged, that the time will not be far distant when we can receive queens from Italy through the mails, and thus save the heavy expense now attending the importation of queens from that and other foreign countries. I firmly believe that queens can be so put up that they will stand a month's journey in the mails, and perhaps longer.

For 3 years past I have sent many queens to Canada by mail, and since the first year I have had no more trouble with their going safely, than in the U. S. I see by a late BEE JOURNAL that the Superintendent of the Foreign Mails gives notice that it is not lawful to send queens by mail to Canada. This could have been known by any person having access to the Postal Guide, without appealing to the Superintendent. The Postal Guide distinctly states that *samples only* of merchandise are mailed at 10 cents postage for every 8 oz., or less; hence the sending of merchandise of every kind to Canada, by mail, is illegal.

However, all are aware that *custom* often has more weight upon the minds of the people than does certain laws. For instance, we have a law against working on the Sabbath, yet how many go into the field and labor regardless of the law. So of our laws against adulteration, we can say to our sorrow that customs are stronger than the law. In the time of slavery, custom said the law allowing the master to capture the slave, when he had escaped, was not a righteous law, and many a bold man helped the slave to escape. So it seems to have become a custom with the most of the postmasters in the United States and Canada to look upon queens as mailable between the two countries.

The first year I mailed queens to Canada, I lost several by their being held by postmasters in Canada. Finally, Mr. Williams, of Nixon, Ont., wrote me if I would put on the cage, "Queen bee for the improvement of stock," that there would be no trouble regarding their safe delivery. Since then I have done as he advised, and have not lost a queen in a single instance; although this was evidence plain to every postmaster that the package contained merchandise instead of samples. I have always, however, stamped every package with 10 cents worth of stamps, although most of our Canadian friends forget to add that to the price of the queen.

As the queen traffic is assuming large proportions between the two countries, I would suggest that a better way than the above would be for some of the bee-keepers of either country having influence with the Postoffice departments to see if a law cannot be obtained allowing queens to pass in the mails between the two countries, thereby avoiding the "very appearance of evil.

Borodino, N. Y.

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For the American Bee Journal.

Kentucky Bee-Keepers' Convention.

The Kentucky bee-keepers met in convention Aug. 29, at Louisville, Ky. The meeting was called to order by President Demaree. Calling the roll and reading the minutes of the last meeting were dispensed with.

President Demaree, Chairman of Committee on "Fertilization and queens in confinement," reported that nothing had been accomplished, and, on motion, report was received and committee discharged.

The following new members were enrolled: J. L. Smith, Horse Cave, Ky.; Wm. C. Pelham, Maysville; J. L. Wilson, Mortinsville; Dr. W. M. Rogers, Shelbyville; C. H. Dean, Jett; C. W. Buck, Midway; W. L. Stewart, Eminence; J. T. Conly, Napoleon; L. P. Moberly, Hardin County; John Craycraft, Smith's Grove; W. P. Gibson, Sherman; C. D. Mizze, Cleveland, Fayette County; R. A. Barlow, Richmond; W. S. Vandyke, Orr, Anderson County; G. W. Jenkins, New Liberty; G. W. Ashley, Valley Station.

On motion the following persons present from other States were made honorary members: W. S. Hart, New Smyrna, Fla.; C. F. Muth, Cincinnati; W. E. Preston, Iowa City, Iowa; R. Grindel, Baden, Mo.; W. C. Henly, Knoxville, Tenn.; W. C. Kemp, Indiana; H. C. White, Madison, Ind.; Miss Emma Sharpe, Waverly, Ind; J. Sharpe, Waverly, Ind.; C. B. Merkin, Eddyville, Ind.; W. Cheney, Eddyville, Ind.; Mrs. Aug. Knoefel, New Albany, Ind.; E. Rockenback, New Albany, Ind.; Master Fred Craycraft, Salem, Ind.; Mrs. E. Rockenback, New Albany, Ind.

Reports from members and visitors were called for.

Allen & Craycraft, 56 colonies in the spring; 40 were run for comb honey and gave 3,000 lbs. in one and two-pound sections; 10 were run for extracted, and stored 1,200 lbs.; about 1,000 comb yet to be taken; increase 26 colonies.

W. Cook, 26 colonies, 1,200 lbs. comb honey; increase 31 colonies.

G. W. Ashley, 36 colonies; 2,000 lbs. comb honey; 600 lbs. extracted; 34 increase.

J. L. Smith, 6 colonies; 450 lbs. of comb honey; no increase.

W. H. Howlett, 75 colonies; comb honey, 500 lbs.; extracted, 7,000 lbs.; 320 lbs. largest yield from one colony; increase, 55 colonies.

Dr. A. W. Kaye; 5 colonies; 500 lbs. comb honey; increase 11.

Dr. L. E. Brown, 14 colonies; 1,000 lbs. comb honey; increase 36 colonies.

J. T. Wilson, 80 colonies devoted to queen rearing; had sold $1,007 worth; 800 lbs. honey.

W. C. Pelham, 65 colonies; 12,000 lbs. extracted honey.

C. H. Dean, 12 colonies; 1,400 lbs. honey; increase 32 colonies.

S. W. Buck, 21 colonies; 2,406 lbs. honey; increase 14.

J. F. Conly, 75 colonies; 500 lbs. comb honey, and 5,500 extracted honey; increase 55; sold $800 worth of honey.

W. C. Cunningham, 31 colonies; comb, 200 lbs.; extractod, 4,000 lbs.

W. L. Stewart, 60 colonies; 4,000 lbs. comb honey; 650 lbs. extracted; increase 66 colonies.

L. P. Moberly, 53 colonies; 1,800 lbs. comb; 200 lbs. extracted honey; increase 29.

Rev. L. Johnson, 42 colonies; comb 800 lbs.; extracted 500 lbs.; increase 40.

G. W. Demaree, 49 colonies; 4,000 lbs. comb and extracted honey; increase 30; 6 colonies gave 600 lbs. of extracted honey.

Report of Visiting Bee-Keepers.—W. S. Hart, New Smyrna, Fla., 76 colonies; 10,000 lbs. extracted honey; increase 88; said his neighbor had 176 colonies; increase 200 colonies; took 18,000 lbs. extracted and 500 lbs. comb honey; said the black mangrove was the best honey-producing flower they had; said palmetto gave large yields of honey in May; swarming commenced in February, and the best honey flow was in May; they shipped honey to Boston, New York and Cincinnati; the native bees were large, brown bees, very gentle and easy to handle; the average profit was $15 to $20 to the colony.

W. C. Henly, Knoxville, Tenn., reported large crops of honey in that State. Mr. Kemp, Orleans, Ind., 17 colonies; 1,200 lbs. of comb honey, 300 lbs. extracted; increase 6; W. C. Preston, Iowa City, Iowa, 37 colonies; 2,000 pounds of extracted honey.

On motion the following committee were appointed to report questions for discussion at afternoon session: Dr. Wm. M. Rogers, W. T. Stewart and J. Craycraft.

President Demaree then delivered his annual address, which was well received.

On motion of Dr. Brown, the convention adjourned till 2 p. m.

EVENING SESSION.

The convention was called to order at 2 p. m. Committee on questions for discussion reported the following:

1. Spring management of bees.
2. Methods of preventing natural swarming.
3. The character and practical uses of comb foundation.
4. What are the best and cheapest packages for marketing honey in bulk?
5. Can benefit be derived from the new races of bees?

On motion, report of committee received and committee discharged.

On motion the election of officers for the ensuing year was held with result as follows: G. W. Demaree, President; J. Craycraft, Vice-President; N. P. Allen, Secretary; I. B. Nall, Treasurer.

Vice-Presidents.—E. Drane, Shelby county; J. L. Smith, Hart county; Wm. Cook, Warren county; G. W. Ashley, Jefferson county.

The convention then discussed the following questions:

1. Spring management of bees, discussed by C. H. Dean, C. F. Muth, G. W. Demaree, W. C. Preston, and C. W. Buck.

2. Methods of preventing natural swarming, discussed by G. W. Demaree, C. F. Muth, and N. P. Allen.

Conclusion.—That swarming could be prevented by giving the queen plenty of room to deposit eggs, and the workers plenty of room to deposit honey. Mr. Dean gave his method of preventing swarming.

Mr. Cook said he pinched off the head of the queen, and returned the swarms, and gave them a good smoking.

3. The character and practical use of comb foundation. W. C. Pelham said 5 feet to the pound was most desirable for brood comb.

President Demaree said bees did not build on the wall of the cell, but drew it out, and that the cells ought not to be so deep that the bees could not reach the bottom, as the base of the cell would be too thick.

Mr. Muth illustrated how to arrange wire in foundation, and said it should not touch ends or bottoms of frames by ½ inch.

Dr. Kaye said, when foundation sagged and was crooked, he put a board on the comb, pressing it down level with frame, first cutting foundation loose from frame, and always got straight comb.

G. W. Demaree and M. Buck had tried it, but did not like it.

Dr. Allen said foundation should be absolutely pure beeswax with no mixture of paraffine or other wax.

Mr. Pelham cautioned bee-keepers against using paraffine in the smallest quantity in beeswax for foundation.

Adjourned to meet at 7 p. m.

EVENING SESSION.

What are the cheapest and best packages for marketing extracted honey in bulk?

Mr. Muth said, he preferred cypress, or any soft wood for barrels; preferred barrels and half-barrels, or smaller; said 90 out of 100 oak barrels would leak; can afford to pay more for soft wood barrels; can buy cypress barrels in flat for $1.65 at the factory; said he desired four wire nails in the bungs to secure them from being removed; in small packages, sells one pound better than two pounds; is not in favor of fancy or gaudy labels for cans or buckets. Mr. Hart prefers 40 gallon barrels, soft wood.

Dr. Allen said, oak barrels, no matter how well seasoned, would shrink after being filled with honey, and the hoops should be driven up from time to time.

Can benefit be derived from the new races of bees? Dr. Allen said, he did not think we were benefitted so far by the new races.

G. W. Demaree said, he doubted if there was a pure race of bees in the world, and could not see at present that we were benefitted by the new races introduced, but thought the time might come when a more valuable race would be developed.

On motion, the President appointed the following committee to prepare questions for discussion at the next annual meeting: C. H. Dean, Wm. Cook and W. T. Stewart.

Adjourned to meet at 9 a. m.

Aug. 30.—Convention mat at 9 a. m. The following committee was appointed to collect information as to the conditions of bee-culture in Kentucky, and to the adaptability of the State to honey-production, giving the sources from which honey is gathered in the State in different localities: N. P. Allen, W. C. Pelham, and J. L. Conley.

The committee to draw upon the treasury of the society for stationery and printing circulars.

On resolutions: Dr. Kaye, J. T. Conley, and J. T. Wilson.

On exhibits: C. F. Muth, W. S. Hart, and A. C. Cunningham.

On motion, it was decided when this convention adjourns it should adjourn to meet at Eminence, Ky., the time to be fixed by the executive committee.

Resolutions were [illegible] by the committee and [illegible] thanking the managers of the Exposition for courtesies and the liberal premiums; the press, for notices; and requesting the papers of the State to publish the proceedings.

The committee on exhibits of honey and bee-keepers' utensils reported about 20 exhibits, which made a very attractive show.

N. P. ALLEN, *Sec.*

For the American Bee Journal.

Pasturage for Bees.

A. R. KOHNKE.

Having experimented quite extensively with honey-producing plants this summer, I will contribute my mite toward improving bee pasturage.

I must join with Mr. J. F. Plummer in pronouncing borage THE plant *par excellence*. Bees will leave everything else if they have that. The honey is as light as white clover honey, but of better taste and flavor. Next year I intend to sow several acres with this plant. If sown three weeks before white clover comes into bloom, it will be at its best when that plant begins to fail. I sowed some as late as July 1, after which a drought set in, in consequence of which it was very slow in coming up. But it is blooming now, and the heavy frosts we have had this month have not injured it in the least; the bees improving every shining hour on it, especially the Italians. The latter will be out working even when quite cool; the blacks would not.

On mignonette they worked very little; last year, not at all. Last year, and the year before, I sowed some sweet clover, but it never came up; but I have seen the roadsides in Virginia covered with it, but no bees working on it, though there was no other plant in bloom, except, perhaps, red clover, which is very extensively cultivated; but no bees did I see on that either.

Then I received also some 20 different kinds of seeds from Switzerland, among which were a few kernels of the giant balsam (not giant lady slipper, as some one wants to have it, as it is not related to the lady slipper family or species). I am sorry to say, the seed did not come up, as also many other kinds did not make their appearance. Some proved to be biennials, not flowering the first year; among those which bloomed, phaselia was visited the most. All the others the bees treated with indifference.

But one other thing, I have noticed that bee-pasturage improves where bees are kept; perhaps on account of a more extensive fertilization of the plants by bees, causing a more abundant seeding.

Youngstown, Ohio.

For the American Bee Journal.

Doubling up for Winter.

MRS. E. H. MASON.

As this is the season for doubling-up colonies, I will give my method, for the benefit of the bees, as it prevents fighting:

Take a canvas or honey cloth a little larger than will cover the frames; cut out a piece in the center 4 or 5 inches square, take a piece of wire net, place it over the opening and wax it down good and strong around the edges, then cut another opening in the side of the honey cloth an inch square; lay over that a strip of canvas, leaving the end long enough to hang on the outside of and between the hive and top box; wax that slightly over the inch opening, yet so that it can be readily drawn off; take your new cloth and go to the hive that you wish to give the swarm to, lift out a frame of brood with eggs and larva, brush the adhering bees back into the hive, spread on your prepared cloth, lay on the cushion and cover up till needed, then take an open box or hive, that will fit snugly to your prepared hive; hang in your frame of brood, carry it to the hive you wish to break up, lift that to one side, or a few feet away, set your box on the same honey board, and cover with a thick cloth; lift out a frame of bees and roll the cloth back, and brush them into the box and cover up quickly, to keep out robbers. The rest of the frames may be brushed off in front on the alighting board, leading to the entrance, which must be contracted to keep strangers from running in. Always have your honey box close by you so as to hang the honey frames in, and cover the canvas down closely as fast as you hang the honey in, that the odor may not escape and attract robbers. Pick up the old hive and jar or brush the adhering bees in front of the box, and carry the old hive quickly away—put away the honey box, sprinkle a few tansy leaves in front of the box, and set up a shingle in front and leave them until in the cool of the evening, then take the top and cushion off of the bee hive, lift your box of bees as gently as possible from the honey board, and carry them steadily to the hive and set them close down to the honey cloth. If the hives do not fit closely, wind a strip of cloth two or three times around the crevice, or cork it up. Let them stand that way for two or three days, so that they will forget the old stand, then slide out the strip of cloth from the inch opening, in the dusk of the evening, and leave the bees to mix themselves. At any time after a day or so, lift off the box, take out the frame of adhering bees and set it back into the hive where it belongs; spread on a tight honey cloth and cushion, and cover up for winter. Shake the rest of the bees that adhere to the box in front of the hive. Those who will try this method will find their colonies doubled up "just too lovely for anything." I have not told you how I catch and cage the queen, for I never double up a swarm that has a queen.

My bees have done splendidly. I have 83 colonies, all strong and healthful, fine workers, gentle and good natured. I have attended and managed all these bees entirely alone, and by myself.

Vincennes, Ind.

For the American Bee Journal.

Bees & Honey at Western, Ont., Fair.

W. H. WESTON.

The exhibition of honey in connection with our Western Fair, which has just been held here, was remarkably good this year, being the largest ever shown in this city, amounting to about 10,000 pounds, in all shapes and sizes, from the half-pound section of comb and the 5 cent can of extracted, to the large crate of one-pound sections ready for shipment, and the largest size can of extracted, for the same purpose.

I will just give a short account of the exhibits as they appeared in the hall appointed for the display of this healthful and toothsome article of food.

Mr. Jos. Aches makes a very good show of honey, both comb and extracted; also a cage of Holy Lands, which were admired by the many visitors who were anxious to know more about bees.

Dr. Nugent shows the largest amount of honey in the building, and makes quite a display. He says that he has taken 10,000 pounds from 150 colonies, most of which was extracted.

We now come to the most tasty display of both comb and extracted honey in the Fair, and if there had been a prize, I have no doubt Mr. David Chalmers, of Musselburg, Ont., would have taken it. He had bee books, knives, smokers, etc., all of which he had for sale, and to all appearances had quite a trade.

Mr. John Rudd, of this city, made quite a nice display, as did also Mr. H. H. Smith, of this county, and one or more others.

I might just remark that considering the amount of money given in prizes, the bee-keepers of this section have done extra well this year; the total amount given in prizes is $11. The directors still stick to the prize list, which they adopted eleven years ago, but which will be considerably larger next year I hope.

London, Ont., Oct. 5, 1883.

For the American Bee Journal.

Bee & Honey Show at St. Joseph, Mo.

The display of bees and the various products and appliances of the apiary at the Inter State Exposition, which has just closed, has been a most satisfactory one, and shows that the interest in bee-culture is fast gaining ground in this part of the West. The display at last year's Exposition was very encouraging, and the impetus given to this industry by the interest manifested then, showed itself plainly this fall. The exhibit was fully 300 per cent. better than it has ever been before, and that is saying a great deal. It is beginning to be plainly seen that as a honey-producing country, this has many advantages, and apiaries are scattered here and there in close proximity.

Our Exposition manager, President N. R. W. Hartwig, and Secretary C. F. Ernst, are deserving of great praise for the very liberal and excellent arrangements offered exhibitors to display every thing pertaining to "bees and honey" to the very best advantage. They evidently appreciate the growing interest this valuable industry is developing throughout out entire country.

The apiarian department was under the charge of Mr. D. G. Parker, who acted as superintendent, and was to be found at his post night and day. He resides about seven miles south of this city, where he has 80 colonies of bees, and is provided with all the modern apiary appliances. He has made the subject of bee-cuture a study for more than eight years, and while well-versed in the art, is an enthusiastic admirer of fine bees and honey. He also has quite a large class of amateur bee-keepers that are progressing finely under his teachings Mr. Parker had several colonies of bees, also a large amount of magnificent honey on exhibition, but being superintendent of the department, did not make any entries. The exhibition embraced nearly 3,000 lbs. of honey and 20 colonies of bees, also queens in wire cage, nuclei in obsevatory hive, in which the bees could be plainly seen at work about the comb. These are all familiar to bee-keepers, but to those not initiated in the art, they call forth expressions of great surprise and delight, and show that the spirit of progress is abroad in the land.

Among the prominent exhibitors, were Mr. J. L. Smith, Lawson, Mo.; Mr. Ernst Shuman, Breckenridge, Mo.; Miss Pateet, St. Joseph, Mo.; Mr. J. B. Stancliff, Brookfield, Mo.; Mr. J. Madinges, St. Joseph, Mo.; Mrs. Roy, King Hill, Mo.; Mr. D. A. Pike, Smithburg, Md.; Mr. H. Scoville, Columbus, Kans.; Mr. E. F. Gordon, St. Joseph, Mo. Mr. Scoville's exhibit was a very interesting one, consisting of a bee library and apiary appliances of every description used in modern bee-keeping, including 30 varieties of seeds of honey-produning plants, also sample copies of 18 bee periodicals from all parts of the world. Large crowds visited this department during the entire week, and Mr. Parker was indefatigable in explaining everything to the spectators.

The premiums were awarded as follows: Best display of bee-keepers' tools, implements and fixtures, best bee feeder, best honey knife, best bee smoker, best comb foundation, best bee veil, wax extractor, largest assortment of honey-producing plants, and best display of Italian queen bees, to Scoville & Anderson.

Best and largest display of honey in comb, E. Shuman, Breckenridge Mo., 2d premium, J. B. Stancliff, Brookfield, Mo.

Best and largest display of extracted honey, J. L. Smith, Lawson, Mo.

Best colony of bees in hive, including handling and subjugation, E. F. Gordon, St. Joseph, Mo.

Best foundation machine, Ernst Shuman, Breckenridge, Mo.

Best honey extractor, also best display of honey, Miss Pateet, St. Joseph, Mo.

Best and largest display of comb honey, J. L. Smith, of Lawson, Mo.

Best display of Italian bees, E. Shuman, Breckenridge, Mo.

The brilliant success of this exhibition will undoubtedly add many new recruits to this pleasant, interesting and profitable industry. H.

St. Joseph, Mo., Sept. 29, 1883.

For the American Bee Journal.

Section Racks Again.

T. E, TURNER.

It is a little out of season for an article upon surplus arrangements, as the season for surplus honey in most localities has closed, but my surplus time was all occupied looking after bees, honey, and other things, when an article on section racks would have been most appropriate. But it is never too late to "do a good act."

I have no ax to grind, and I trust your readers will bear in mind that I am not a supply manufacturer and dealer, and have no personal interest in any particular rack, but that I have an interest in whatever will be for the advancement of apiculture.

Inquiries have been made in the Bee Journal of Mr Heddon, about his rack, how he gets the sections out of it, and how he can tell when they are full? Now, if we look at it, a rectangular box, the right size to hold a certain number of sections, with a bottom board to place on top of the hive with ⅜ inch space under it over the brood frames, and the same space on top under the sections, we will not think it strange that the ordinary bee-keeper should ask such questions.

Some years ago I was ready to ask the same questions of a Wisconsin apiarist, manufacturer and dealer in bee-keepers' supplies, about a similar rack, but the portable-sided rack with glass views put a stop to such inquiries.

An ingenious fellow can master the situation and meet the necessities of the case by a process of underpinning the racks inverted, and knocking the sections down and out, but others set about to improve the rack itself with portable sides, so the sections could be removed with ease without any knocking and jarring, and with glass in the sides so the sections could be seen when full without removing the honey board.

Now, I need not ask any one how to remove the sections and how to tell when they are full; but can look through the glass and see into the sections without disturbing the bees, and take away the racks from three or four sets of sections per minute, if desired, and leave them on the table ready for casing. This is three or four times as fast as Mr. Heddon claims he can remove them from his rack by [illegible] most ingenious underpinning an[illegible]cking down process. Then his rack c[illegible]y has too much space between the bottom of the sections and the brood-chamber, ⅜ inch under the honey board, and ⅜ inch above it, and ½ inch for it (honey board), will make 1¼ inches between. It is universally admitted that the nearer the sections are to the brood-chamber, the quicker the bees will occupy them, and hence the more honey they will put in them.

Then in tiering up there is ⅜ inch between each set of sections when there should be none at all. The racks should be no deeper than the sections, 4¼ inches, and then one tier will set right on another, leaving no space between tiers, and but ⅜ inch space over the brood frames under the honey board.

The sections should stand on a honey board with slats the same distance apart as the bee-passages between them, which will protect them from propolis and any waxing in the top or bottom. Experience has taught that bees will wax the bottom and tops of sections more or less when they are exposed, and I believe bee-nature under the same conditions is the same the world over. This would be a great improvement in the way of keeping the sections clean, and would be far in advance of the old broad frame system.

The broad frames for holding sections with its inconveniences is fast giving place to the new racks, just as fast as bee-keepers are becoming enlightened in the best modes of holding sections in place on top of the hive. The stationery-sided rack without glass is inconvenient if only a part of the sections are full and to be removed, for a whole tier must be taken out to get one full section out, or run the risk of breaking the capping in shoving it by another one.

The portable-sided rack has all the advantages of tiering up and of removing sections by the rack, instead of one at a time, that the stationery-sided rack has; and then it has the advantage of removing a part of the surplus honey, one or more sections, without disturbing the others, if desired, in case of a shortening up of the honey flow, or danger of coloring up of the combs. Separators can be used in the one as well as the other, but I regard them as worse than useless in either. The glass to view the sections to tell when they are ready to remove from the hive, I regard as a very convenient arrangement, but the rack may be made either with or without glass, to suit the taste, in that respect; but the portable-sides in a rack I regard as very necessary and important. The portable-sided rack certainly has *all* the *advantages* of any other kind of a rack, and *none* of their *disadvantages* as far as my knowledge extends on section holders.

Sussex, Wis.

For the American Bee Journal.

My Fourth Annual Report.

EUGENE SECOR.

I belong to the amateur list. I keep bees because I like to; in fact, because I cannot help it, and not merely for the dollars and cents it brings me. I belong to that number who believe in occupying their leisure moments in a profitable industry, rather than with fast horses, dog and gun, billiards or base ball. Hence I have drifted into those delightful employments of cultivating fruits and keeping bees as a recreation, and as a means of furnishing the family those luxuries which money cannot always buy in the markets of a small inland town. My love for the fascinating art, made practical by the immortal Langstroth, increases with my years, and some day I may make it my specialty.

The past four years have been exceptional in many respects. A great deal of cool and wet weather during the summers, and at least two very trying winters, have militated against the highest achievements in the apiary. The season just closed has been very cool. There has been frost about every month, and only a short time when the nights were warm enough for the bees to venture far from the brood nest; comb-building in surplus boxes was, therefore, slow. Frost came and killed the flowers about two weeks earlier than usual, and cut short the best honey flow of the season. White clover bloomed freely, but gave hardly any surplus. Basswood appeared to be plentiful and full of nectar, but as it rained nearly all the time it was in bloom, we obtained no honey from it. Sumac has again this year proved to be one of the best honey plants among our mid-summer blossoms. Some section boxes filled with this kind of honey, present a wonderfully clear and beautiful appearance. The fall flowers were plentiful and yielded generously until the freeze, Sept. 8.

I began the season with 14 colonies, all in fine condition except one. They increased by natural swarming to 26. I devoted three colonies and their increase to extracted honey from upper stories, and the remainder to comb honey in 1¼ lb. boxes. They began swarming in May and kept at it at intervals till late in August. All but the first swarms were returned. The first surplus removed (box) June 29. I kept a strict account with each colony, as well as every important fact in its history, by means of a card on the top of each hive.

Total number lbs. comb honey, 758; extracted, 450; total, 1,208 lbs. Greatest amount of extracted from one colony and its increase, 151 lbs. Least amount of comb honey from one colony, 23 lbs. Greatest amount of comb honey from one colony, 114½ lbs. Average, comb and extracted, per colony, spring count, 86 2-7. This is not as well as I expected to do, nor as well as I should have done, had the season been a little more propitious; but, as none of my neighbor bee-keepers have done as well, I ought to feel somewhat reconciled.

I shall never be satisfied until I can make my colonies average a hundred pounds or over, of comb honey. I believe such possibilities are in the business, and if I can only reduce that possibility to a certainty, you may then write me among the happy mortals who "get there."

Forest City, Iowa, Oct. 1, 1883.

For the American Bee Journal.

Drone-Laying Worker Bees.

GUST. MARHARD.

Having noticed some articles in the BEE JOURNAL on drone-laying workers, I thought I would send you my experience with them during the 30 years of my handling bees.

The first case was a strong black colony, which had been deprived of its queen to force them to construct royal cells for use in the apiary. The colony constructed seven fine cells, six of which were taken out and but one left them. The young queen was lost in her bridal excursion, when they were furnished with another royal cell. The queen was again lost. The weather here in Oregon is very changeable, and unfavorable for queen rearing a greater part of the year.

Fresh brood was then given to the colony, as there were no royal cells just then. But the bees had, in the mean time, accepted of a drone-laying worker as queen, and did not construct any royal cells. I then gave them a good laying queen, but found her gone the next day, when I gave up the colony as unredeemable, after I had taken them into a room before closed windows, and had made them all travel, to see if I could not discover any suspicious looking worker among them, in which I failed.

In the mean time summer has passed, and it happened that a small colony of bees, with a laying queen, which had left its hive in despair, came to settle on an apple tree in my garden, which I hived for to experiment with them on my despaired-of colony, with the drone-laying worker. The colony belonged to a neighbor of mine, who was a real genius of a bee man, a great experimenter, and very neglectful man, who tried to rear queens of drone brood, experimenting with his colonies until he had not a decent colony left, and who either would not shut his hives at all or would cover them but partly. But the bees did belong to another man, and it is not a costly thing to experiment with another man's property in a trifling way.

I united the small colony with the afflicted colony, shut the hive up, after smoking them well, and let them alone for an hour. After re-opening the entrance of the hive, about 50 dead workers were pushed out. Next day I found the queen alive, and the colony thenceforth went on all right.

I have had several cases since, and have saved every colony by taking a frame of brood with the queen and bees thereon and setting the same in a new hive. Then remove the hive with the drone-laying worker, and set the new hive in its place. Then take the combs of the affected hive out, shake and brush all the bees therefrom, before the entrance of the new hive, to make them enter. After this is done, either put the emptied combs in the hive also, or exchange them for combs out of another hive, which latter way is by far the better. The bees with the queen on the frame are by no means in a fighting spirit, and the bees of the drone-laying worker colony become dispirited by taking their combs and making them enter a new hive with new combs. The workers on the frame with their queen will defend their queen until better counsels prevail, and the drone-laying worker is dethroned.

The exchange of combs is also the safest way to introduce a new queen in another colony, and it can be done within an hour's time without fear that the bees will destroy her upon introduction, or any time thereafter, when the bee-keeper may wish to open and inspect the hive. If the bees are forced to accept of strange combs and brood, they are just as ready to accept of a strange queen as soon a they have become convinced that th loss of their queen and her brood i irrepairable. This will be within an hour's time, at the farthest. I once received from California a Cyprian queen unexpectedly. She arrived late in the afternoon, and I had no colony ready for her reception. I went to a hybrid Italian colony, found and removed their queen, took all their comb containing brood, and exchanged them for others out of another hive. Half an hour later I introduced the Cyprian queen in a black cage with the hole filled with honey in the comb. I found the queen next day all right on the combs.

Portland, Oregon, Oct. 1, 1883.

Bees and Honey at the Maine Fair.

This is the first time for seven years that a full line of bees, honey and bee implements has been on exhibition at the Maine State Fair, and it was very successful. Mr. Jerrard's exhibit was among the best. By an ingenious contrivance the packages containing a hundred weight or so, are placed upon springs, thus insuring safe transportation with ordinary care in handling. Two colonies of bees from Mr. Jerrard's apiary confined in observation hives, form an interesting exhibit. The farming of this class and awarding premiums for bees and apiarian supplies, is a new feature of the State society, and, as the entries and exhibits in this line shows, struck the bee men in the right spot. The exhibits in this class are quite numerous, and comprise a large collection of hives and fixtures that, to the practical bee man, has much interest.

Mr. E. P. Churchill, of North Auburn, makes a good exhibit of his chaff hives, division boards and bee fixtures. He also makes a good exhibit of honey put up in various tempting forms, a bee tent of simple construction, by which one can manipulate bees to exhibit, transfer, etc., without fear of robbing by predatory bees. His exhibits also comprise a colony of bees in observation hives.

Piscataquis' veteran bee-keeper, Mr. Lucian French, of Sangerville, makes a large and interesting exhibit of tools for the apiary, and honey and wax.

Among the curiosities, was Mr. French's foundation machine, whereby the comb is started for the bees, and taking hold where the machine leaves off, the bees find the labor greatly curtailed in getting the summer stores. Mr. French gave a practical illustration of the working of the machine, showing how sheets of wax were passed through and came out with the cells perfectly formed.

Mr. French makes a tempting display of comb and extracted honey in jars and in 1 lb. sections.

Next to Mr. French's is Mr. Reynold's exhibit. Mr. Reynold lives in Clinton, and handles his bees with great skill. His exhibit shows to fine advantage, his honey being put up in nice shape in one to three pound jars, and nicely labeled; also comb honey in sections temptingly white and nice.

Mr. J. B. Mason, of Mechanic Falls, makes a large exhibit of tools and fixtures used by bee-keepers. Mr. Mason is one of the most intelligent bee-culturists in the State. Among the curiosities of Mr. Mason's exhibit is a collection of bee literature comprising old and modern works. The collection comprises 14 bound volumes and some 20 pamphlets. Another original idea is the life of the bee from the egg to the mature insect, larvæ preserved in alcohol in its various stages of growth, comprising 19 periods, that being the daily changes in life in coming to maturity.

Mr. Mason makes a good display of honey put up in various forms. A number of Italian queens are shown in cages, also an observatory hive in which the bees are seen as living in the hives.—*Maine Farmer.*

For the American Bee Journal.

Home Markets for Honey.

DR. J. R. BAKER.

I notice in the BEE JOURNAL that the Editor, Prof. Cook, James Heddon, etc., urge upon bee-keepers to create home markets for honey. At Keithsburg, Ill., where I had the most of my experience as an apiarist, there was an excellent home market established, largely by Mr. Martin Wirt, who, for a number of years, was engaged in scientific apiculture in that locality. I found no trouble to dispose of two and even three thousand pounds of comb honey a year, at from 15 to 20 cents per pound, in the Keithsburg market; and the village only contains about 1,200 inhabitants.

When I came to this city, this spring, broken down in health and purse, I was unable to engage in apiculture at all, but having a brother here who is engaged in the grocery trade, I persuaded him to handle honey. We found a gentleman about 8 miles in the country, who was raising comb honey in good shape, and we engaged to take all he could raise during the season at 17 cents per pound. We made mention in the daily paper of the city, that we had nice comb honey for sale, and people soon called to make purchases; and in a short time we were selling quite fast. Every one who called to see our honey was delighted with its fine appearance. We had it all nicely arranged in a large handsome show case, and had the show case setting on the end of a counter near the entrance door,

After other grocers learned how eagerly people bought our honey at 20 cents a pound, they would hail our honey man whenever he came to the city, and want to buy honey of him; but he told them that they were too late, as he had engaged it all to our house.

Good honey, nicely put up, will sell well anywhere, but the good old-fashioned way of cutting out of the brood-chamber honey, pollen and brood, and casting the whole mess into a pot, jar or pan and taking the stuff to market, was not well calculated to get up a boom in the honey trade.

A farmer brought a dish-pan of this kind of medley to us this summer, and I asked him how much he wanted a pound for it, and his price was the modest sum of 15 cents per pound. I told the vender of much filth and little honey, that I would not take the stuff as a gift, and he went away feeling hurt over my ignorance as a judge of honey. This gentleman told me that he had much better "luck" in log gums than in "patent" hives.

Mr. Heddon was exactly right in his brief article a few weeks since, in urging honey-producers to not sell their honey at a sacrifice. There is no use for apiarists to become alarmed at the prospect or rumor of a big honey crop, and sell at a sacrifice. The better plan, I take it, is too keep cool and be governed by soberness. Last summer, every few days the grocers, who handled the most of my honey, would say to me that honey was so very plentiful that I would have to sell at smaller figures. When I would ask them where they got their information, they were compelled to tell me that some farmer or farmers told them so. I knew that neither the farmers nor the grocers took any bee journal, and had no means of knowing anything about the honey trade or prospects throughout the country.

These scares in the local markets are gotten up through the ignorance of persons who keep a few bees, and who think that if their bees swarm much, and they have a starch box or two filling with honey, that they are doing "splendid." With this magnificent (?) bonanza right under their noses they will make haste to offer the grocers large lots of honey at from 10 to 12 cents a pound, and the grocers in their innocent ignorance hasten to collapse the scientific honey raiser with their ox-load of information.

Last season I was selling honey to a lady for her own use at 20 cents a pound. She told me one day that she had engaged honey of Mr. S. at 15 cents a pound. I asked her how much, and she said any quantity that she might want. I told her that when she got through using Mr. S.'s 15 cent honey to let me know and I would then sell her some for twenty cents per pound.

Time rolled on, and she called on me for honey. I asked her how much she got from Mr. S., "Not a pound," she replied. I told her I knew it just as well before she told me as I did after, and she wanted to know how I knew. "Easy enough," I said, and then I told her that Mr. S. started in the spring with 5 colonies, and that they had swarmed so much that he then had 30 colonies, and in his ignorance he based his large prospects on the number of colonies he possessed; but that all scientific apiarists knew that it was impossible to have such a heavy increase and a large crop of honey the same season. That the bees of Mr. S. had kept themselves so weakened by their excessive swarming, that they could not possibly gather surplus honey.

This case is simply one given to illustrate how silly it is for honey raisers to become alarmed over the ignorant grape-vine rumors about the tremendous honey yield in the country, based on the statements of log-gum, box hive and starch-box bee-keepers.

Do not give your honey away my friends, nor sell it at ruinous prices, for a careful review of the reports of honey raised throughout the country leads me to the conclusion that the crop, this season, is rather light.

Warsaw, Ind., Oct. 3, 1883.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Can Pollen be Utilized ?

Can the pollen or "bee bread" so called, which is found in such quantities in combs, at this season of the year, be utilized ? I could get a good deal from neighbors who adhere to the old style of "taking up" bees, and thought if it could be used in the early spring, when wanted, it would be worth something. BEGINNER.

ANSWER.—I consider this pollen you mention. of no use to you. If your bees need early stimulating (which we used to think was the case here, but on which we have changed our opinion), I believe it is generally conceded by bee masters, and plainly shown by the actions of the bees, that rye or graham flour, is of much more value than old, natural pollen.

Uniting Colonies in the Fall.

Will Mr. Heddon please answer the following question :

I wish to dispose of a part of my bees, as I think this place is overstocked. The demand is so small, and the prices so low, that I think the honey and the empty combs will be worth more to me than I can get per colony. I want to know if it will be safe to unite the colonies, and thus save the bees, and at the same time reduce my numbers. If so, when is the best time to do it ? My colonies are strong, and the hives are well-filled with honey.

J. B. STANCLIFT.

Brookfield, Mo., Sept. 29, 1883.

ANSWER.—My own opinion is, that such uniting will damage you; that the single colony is worth more to go into winter quarters with, than the proposed "doubled-up" ones. Often the results of such doubling, prove less merciful to the bees, than a sponge of chloroform. Where bees are to be destroyed, I advise the following :

"Take up" the colony at that time when they cease to gather more than they consume. About 21 days before that time arrives (as near as you can guess), remove the queen. This stops the breeding and the gathering of pollen to a great extent, thus giving you less bees and bee-bread, and more honey at the time of reducing your numbers.

Some object to the killing of bees, but some of these persons encourage the killing of cows and calves by daily consuming large proportions of beef and veal.

Laying aside the question of "cruelty to animals," there are many advantages in this "taking-up" plan :

1. By so doing, you raise the standard of your colony rapidly, by destroying the inferior queens.
2. It saves the purchase of many supplies.
3. It tends to prevent opposition in your field and market.

If you reduce your number of colonies to just what you need the following spring, you should be pretty sure of safely carrying that number through the winter.

Did the Bees Have the Dysentery ?

I began the season with about 25 colonies; bought a few more and increased to 60. My crop is about 2,500 pounds, mostly comb. From ⅔ to ¾ is smartweed honey; the balance is from the Spanish needle; all is of good quality, and thick; being all gathered in dry weather. No surplus was gathered until the last of August. Will some one please tell me how they extract Spanish needle honey ? It is always so thick and tenacious that I cannot remove it clean from the combs. In winter I can almost stack it up without pails or barrels. Smartweed is easily managed in the extractor. I have been holding the entire crop at 15 cents per pound, against a 12½ retail market. Yesterday morning I took some racks and sections into the honey house from hives when it was so cool that no bees were flying, but some adhered to the boxes, and at noon were flying to the door and daubing things like bees having the dysentery. Was it the chill character of the honey, or something else that caused it ? I have only the two kinds of honey mixed, to winter on, and pollen is not abundant.

R. C. AIKIN.

Shambaugh, Iowa, Oct. 4, 1883.

ANSWER.—The cause of bee dysentery, of which a colored and partially soiled evacuation, may be called among the first conditions, is as yet in dispute. Some of our experienced brethren would pronounce chilled honey the cause. For my own part, I do not see how a liquid can be changed to a solid, especially of the character of the particles contained in this feces, by a sudden "chilling." I do, however, see how a short confinement will cause young pollen-eating bees to void a feces well-filled with particles of partially-digested pollen. While it may prove true that pollen-eating is the cause of dysentery, in every case it may turn out a fact, that under most favorable conditions bees *can* consume bee-bread during confinement, and yet remain healthy. I rather doubt the last proposition, however. In the case you mention, there is no cause for apprehension, as there is no intestinal inflammation, or at least none that will shorten the life of the workers. This we know by experience.

SELECTIONS FROM OUR LETTER BOX

Mississippi Valley for Bees.

This has been a poor season for bees. We have only ⅓ of a crop of honey, and very little increase. In the early part of the season it was too cold and windy, and, after July 1, it was so dry that bees could get no nectar from clover. I am thinking of moving down on the Mississippi valley. Do you think that there would be many bees drowned crossing over to the islands to get honey ? There is plenty of honey to be gathered there this fall. I send you a plant for name.

J. F. SELLERS.

Reynolds, Ill,, Oct. 8, 1883.

[The plant is an aster, and excellent for honey.

The Mississippi valley yields excellent fall flowers, and some bee-keepers move their bees to the bottom lands, in the fall, to utilize it. If the bees have to fly across the water to pasture, there is danger of loss in high winds, etc., but we think that loss would be trifling.—ED.]

Report of the Buckhorn Apiary for '83.

I commenced the spring with 83 colonies—have increased to 78 by natural swarming. I have obtained 2,500 lbs. of comb honey, 4,000 lbs. of extracted, and 50 lbs. of wax. The comb honey is all sold in the home market, and averaged 17 cts. per lb., and the extracted at 14 cts., by the help of the pamphlet on "Honey as Food and Medicine." My "boss" colony gave me 300 lbs. of comb and 400 lbs. of extracted honey. This colony gave three swarms, and the first colony swarmed once, making in all five swarms, all in good condition and well supplied for winter. I winter in a bee cellar under my bee house.

F. A. GIBSON.

Racine, Wis., Oct. 8, 1883.

The Results of the Honey Season.

I commenced the season with 12 fair colonies, increased to 65, and have taken 800 pounds of extracted honey. Twelve colonies in the spring, at $10 per colony, were worth $120; I paid for 7 queens, foundation, etc., $65; total, $185. I have now 65 colonies on hand, with an average of 30 pounds each; at $6 per colony, these at $6 each, amount to $395; 800 pounds of honey at 15 cents per pound, $120; 10 queens sold at $1 each, $10; total,

$525. This leaves a balance of $340 in my favor. A good share of the honey has already been sold at 15 cents per pound. I also have several dozen fruit cans on hand as well as 1000 sections and crates for the same. Also 20 pounds of foundation which I do not give myself credit for, which I can use next season. It has been a poor season for honey. It commenced to rain about May 15, and rained 21 days in June, and nearly all the time until July, when the weather turned too dry, and there was no rain for 8 weeks. Frost killed all buckwheat and corn here. S. J. YOUNGMAN.

Cato, Mich., Sept. 28, 1883.

Boneset or Thoroughwort.

It is the first day of October, and the bees are tumbling over one another into the hive, as though they had not laid up winter supplies, and they have not; but a few more days like the last four, with the temperature from 85° to 92° at mid-day, they can feel that they will be able to live high, and even entertain a little. Please name the enclosed weed. The bloom has a delicious aroma, and furnishes a pretty, light honey, but seems to have a curious, if not deadly effect on the bees. While at neighbor Daniels', a couple of days since, we noticed bees dead on the bloom, and under it on the ground; others had fallen off and were crawling away as though over-powered in some way, and others on the bloom too far gone from the effects produced thereby to be able or disposed to sting while handling them. What is just as curious is, that the same bloom apparently has no effect on my bees, they working the day long as lively as crickets. Now, can it be only a temporary imbriating effect it has? or is it poisonous in its effects?

W. T. MADDOX.

Alexandria, La., Oct. 1, 1883.

[The plant is of the *eupatorium* family (boneset or thoroughwort), and is rich with golden nectar. The tea made from it is used as an emetic, and probably that accounts for the temporary weak condition of the bees, especially if they work on it soon after a rain.—ED.]

Bees Gathered Nothing after June.

The season of 1883 has come to a close, and, although, I do not call it a poor one, it is by no means a glowing one, for this part of the State. Bees did little or nothing until June 10, and then the flow, which was very great, lasted only 30 days, and our great expectations were blasted. From July 1 until Aug. 15, there was no honey to be had, and war among the blacks began, and the loss was great. Some of my neighbors, owning black bees, have not received 15 lbs. per colony, spring count; not getting any surplus after the June flow. My bees being all Italians, have done fairly; the average being 100 lbs. per colony, spring count. I say spring count, for the flow stopped with the swarming fever in June. My best colonies gave 168 lbs. of surplus per colony, and the poorest 40 lbs. I prefer Italian bees and Langstroth hives.

J. G. NORTON.

Macomb, Ill., Oct. 4, 1883.

Poor Season in Texas.

I send an insect I captured in the act of carrying off one of my bees. I have noticed several this season; they pounce on a bee while resting on a shrub, plant or tree, and fly off with it. Please name it in the BEE JOURNAL. This has been a very poor season in this locality; no surplus, except sufficient to winter on. Bee-keeping has cloudy as well as bright sides, but to the experienced bee-keeper a dull season this year indicates a bright one next year. The monthly visits of the BEE JOURNAL are a source of pleasure to me.

And though I am here, on the Texas frontier,
With my bees and my JOURNAL on hand;
I hear from them all, both great and small
Bee-keepers, over the land.

May the sweet honey bee, fill our hearts full of glee,
Our minds with sweet prospects store;
Let bickerings cease, and knowledge increase,
By the aid of the JOURNAL'S lore.

ANNIE SUTCLIFFE.

Weatherford, Texas.

[The insect is the bee killer called *Asilus Missouriensis*, which has often been described in the BEE JOURNAL of late.—ED.]

Not a Good Locality for Bees.

I had 8 colonies of bees to commence in the spring, 5 strong and 3 weak ones. They gave me about 30 lbs. of honey in all, and I made two new swarms from the five strong ones. It took the other three all summer to fix themselves for winter. White clover yielded no honey here; it has not for the last 3 years, at least. I think this is a very poor place for bees. Two of my neighbors that live in the timber, 3 and 4 miles from here, say they got a big crop. I have 10 colonies now to try to winter. That is all the good I can get out of them, and I generally loose one-half before spring.

HUGH WILLIAMS.

Racine, Wis., Oct. 6, 1883.

Another Aster.

Enclosed you will find a stock with flowers, on which the bees are working from morning until night. Please name it. J. W. STURWOLD.

Haymond, Ind,, Oct. 5, 1883.

[It is an aster—its value is shown by the preference of the bees for it.—ED.]

100 lbs. of Honey to the Colony.

My bees wintered all right. I began the spring with 7 colonies—increased to 18. I have taken 335 lbs. of extracted honey, and 375 lbs. of comb honey. My bees are mostly hybrids. I have one colony of Syrian bees. I do not know how I like them yet. I use the Simplicity hive, holding 10 frames. I use the 1 lb. sections and winter my bees on from 4 to 6 frames, with chaff division boards at the sides, and then set the hives in cases, holding from one to three hives, and fill all around with chaff. Prepared in this way they will winter with but little loss.

B. W. PECK.

Richmond Centre, O., Oct. 2, 1883.

Unseasonable Weather in Mass.

The weather has been unusual unseasonable for over a month. It caused a loss to me of over 200 queens. I now have 50 fine ones that I will destroy in a few days, as they will not mate this fall. Up to Aug. 1, the weather was splendid for queen rearing; since that date it has been the worst I ever knew.

HENRY ALLEY.

Wenham, Mass., Oct. 6, 1883.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., Oct. 15, 1883.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—Our prices are 7@9c. for extracted, and 14@16c. for comb honey on arrival.

BEESWAX—Arrivals of beeswax are good at 25@28c., and the demand is fair.

CHAS. F. MUTH.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 17@21c. Dark and second quality, 14@15c.; extracted white clover in kegs and barrels, 9@10c.; dark, 8c.

BEESWAX—Prime yellow, 27@29c.

H. K. & F. B. THURBER & Co.

CHICAGO.

HONEY—Comb honey has sold freely for the past two weeks, and stocks are at present low. 1 lb. sections of white comb are bringing 18c.; 1½ to 2 lb. sections of same quality, 16@17c.; various sized sections of white comb, 15@16c. Extracted honey from 8@10 cts. per pound, according to body and flavor.

BEESWAX—Yellow, 32@33c.; dark, 25c.; medium, 30c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—There is a fair jobbing trade. Offerings are not large. Choice qualities command extreme figures. White to extra white comb, 16@20c.; dark to good, 10@13½c.; Extracted, choice to extra white, 8@9½c.; dark and candied, 6½@7½c.

BEESWAX—Wholesale, 27@28c.

STEARNS & SMITH 423 Front Street.

ST. LOUIS.

HONEY—Quiet. Salable at appended figures, but generally held higher. Strained and extracted at 6¼@7c.; comb at 14c.

BEESWAX—Ready salable at 25@26c. for prime.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY—Comes very slowly and sells as fast as it comes at 18@19c. for best white in 1 lb. sections, and 17@18c. for 2 lb. sections. Second quality is very slow. Extracted usually sells very slowly in our market.

BEESWAX—None in Market.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—We quote our market at 18@20c. for 1 lb. white clover; 18@20c. for 2 lb. white clover. Extracted, 8@10c.

BEESWAX—We have none to quote.

BLAKE & RIPLEY, 57 Chatham Street.

KANSAS CITY, MO.

HONEY—A large part of the local crop in this section has been marketed, though considerable remains yet in the hands of producers. Very little California honey in this market this season, except extracted, which is in fair supply at 10@11c. for choice new, and 8½@10c. for dark or candied. Choice bright comb 2 lb. sections, 18@19c.; 1 lb. sections, 19@20c. Demand is fair for the better grades.

JEROME TWICHELL, 536 Delaware Street.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

How to Create a Market for Honey.

We have now published another edition of the pamphlet on "Honey as Food and Medicine," with more *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy 5 cents, postpaid; per dozen, **40** cents; per hundred, **$2.50**. 500 will be sent postpaid for **$10.00**, or 1,000 for **$15.00**. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit. Try it, and you will be surprised.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a statement of account every week.

Trial Trip, until Dec. 31.—25 cents.

Wishing to be able to reach several thousands of the old-fashioned bee-men, and by the aid of the BEE JOURNAL to lift them up to higher ground, adopting newer methods and progressive ideas, we make the following very liberal offer: We will send the Weekly BEE JOURNAL till Dec. 31, *on trial, for* 25 *cents.* In order to pay for getting up Clubs, we will give a copy of Fisher's Grain Tables, or Scribner's Lumber and Log Book, to any one who will send us five trial subscriptions (with $1.25); for a club of *ten* we will give a cloth copy of Bees and Honey; for a club of 15, a cloth copy of the 7th edition of Cook's Manual of the Apiary; for a club of 25, we will present both the Manual and Bees and Honey. If any one wants these Books for nothing, here is an excellent opportunity to get them for a little exertion.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......$1 00
" 100 colonies (220 pages)...... 1 50
" 200 colonies (420 pages)...... 2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey* at Fairs, will sell almost a fabulous quantity of it.

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1 year, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with $6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For four subscribers, with $8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with $10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

Books at Fairs.—Those who make an exhibit at Fairs will find that an assortment of Books and Pamphlets would sell and leave them a profit for handling. We will send such, postage prepaid, at 25 per cent. discount; or if the purchaser pays express charges, we will supply any of our own publications at 40 per cent. discount.

☞ The new two cent rate of postage for letters went into effect on October 1. Three cent postage stamps will now be but little used. For all fractions of a dollar sent to us hereafter we should prefer either *one-cent*, or else five or ten-cent postage stamps, or a Postal Note. Do not send coins in any letter.

Fairs.—To any one exhibiting at Fairs, we will send samples of the BEE JOURNAL and a colored Poster, to aid in getting up a club. The Premiums we offer will pay them for so doing. For a club of 8 subscribers to the Monthly BEE JOURNAL, or 4 Weekly, we will present Dzierzon's Rational Bee-Keeping, price $2.00.

Northwestern Convention.

The Northwestern Bee-Keepers' Association will hold its fourth annual convention at Owsley's Hall, N. W. corner Roby and West Madison Sts., Chicago, Ill., on Wednesday and Thursday, October 17 and 18, 1883, commencing at 10 a. m. on Wednesday and holding five sessions.

The Rev. L. L. Langstroth (the father of American apiculture) has promised to be present, and many of the most prominent apiarists of the Northwest will be there and aid in the deliberations and discussions.

This meeting will be held during the last week of the Inter-State Industrial Exposition, and reduced railroad fares may be had on nearly all the railroads. A cordial invitation is extended to bee-keepers every where to attend this annual reunion.

Meals may be obtained at the Restaurant near the Hall at 25 cts. each. Beds may be secured at the Gault House for $1, or at other Hotels at regular rates.

THOS. G. NEWMAN, *Sec.*
C. C. MILLER, *Pres.*

☞ Please announce that the Iowa Central Association, will meet at Winterset, Iowa, Nov. 2, 1883.
Z. G. COOLEY, *Sec. pro tem.*

☞ The fall meeting of the New Jersey and Eastern Bee-Keepers' Association will be held in the city of New York, at the Cooper Union, on Wednesday, Nov. 7, 1883.
J. HASBROUCK, *Sec.*
Bound Brook, N. J.

☞ The Lorain County Bee-Keepers' Association will meet at Oberlin, Ohio, on the last Tuesday in October, 30th. O. J. TERRELL, *Sec.*

☞ The next regular meeting of the Mahoning Valley Bee-Keepers' Association will be held at Newton Falls, O., on the first Saturday of November, 1883. L. CARSON, *Pres.*
E. W. TURNER, *Sec.*

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

☞ Do not let your numbers of the BEE JOURNAL for 1883 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

☞ May we ask you, dear reader, to speak a good word for the BEE JOURNAL to neighbors who keep bees, and send on *at least one new* subscription with your own? Our premium, "Bees and Honey," in cloth, for one *new* subscriber to the Weekly, or two for the Monthly, besides your own subscription to either edition, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

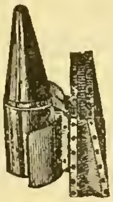
FOR SALE —Wishing to enter into other business, I offer for sale my stock of select Italian Bees, at a very reasonable figure. These bees were selected to rear queens from, and are of the very best quality. Also a number of black and hybrid bees for sale. **ADIN A. SMITH,**
ST. JOHNSVILLE, Mont. Co., N. Y.

ITALIAN BEES AND QUEENS.
Send for Price List to
D. B. BROWN, DES MOINES, IOWA.
42A11t

One 4-Horse-Power
ENGINE AND BOILER.
And One 6-Horse-Power
Portable Engine and Boiler,
FOR SALE CHEAP. Description, Prices and Cuts, sent on application.
Address, **O. H. TOWNSEND,**
35D3t KALAMAZOO, MICH.

1883. JOSEPH D. ENAS, 1883.
(Sunny Side Apiary,)
Pure Italian Queens, Bees, Colonies, Nuclei,
EXTRACTORS, COMB FOUNDATION, &c
19D6m Address, Sunny Side Apiary, NAPA, CAL.

BINGHAM SMOKERS.



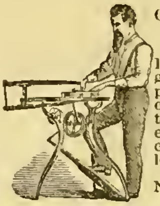
I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including THE CONQUEROR, and THE DOCTOR.
Send for my 32-page Illustrated Catalogue of Bee-Keepers' Supplies of every description.
ALFRED H. NEWMAN,
923 W. Madison, CHICAGO, ILL.

Sweet Clover
AND OTHER SEEDS.
Having a LARGE stock of SWEET CLOVER **SEED.** I can fill orders at **25c.** per pound **$3.25** per peck, or **$12** per bushel.
Also, all other SEEDS for HONEY PLANTS,
ALFRED H. NEWMAN,
923 West Madison Street, Chicago, Ill.

THE BRITISH BEE JOURNAL
AND BEE-KEEPER'S ADVISER.
The BRITISH BEE JOURNAL is NOW published SEMI-MONTHLY, at Seven Shillings, per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. **Rev. H. R. PEEL, Editor.**

We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal*, both for $3.00 a year.

BARNES' PATENT
Foot Power Machinery

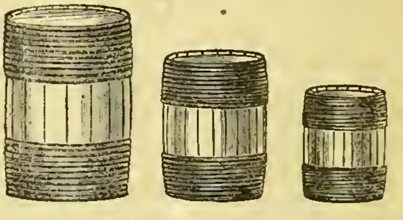


CIRCULAR AND
SCROLL SAWS,
Hand, Circular Rip Saws for general heavy and light ripping, Lathes, &c. These machines are especially adapted to **Hive Making.** It will pay every bee-keeper to send for our 48-page Illustrated Catalogue.
W. F. & JOHN BARNES,
No. 2017 Main street,
Rockford, Winnebago Co., Ill.

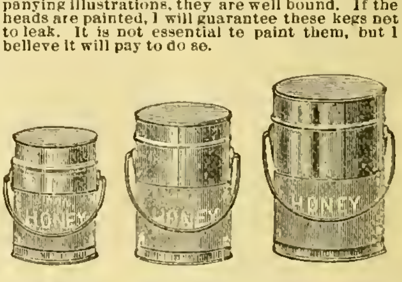
KEGS AND PAILS
FOR EXTRACTED HONEY.
These KEGS are designed to answer the popular demand for honey in small packages, and when compared with large barrels holding from 300 to 500 lbs. each, they are fully as cheap and often cheaper. They need no waxing, but should simply be thoroughly scalded with boiling water before used. The leakage so often occurring in the large hard-wood barrels can be entirely prevented by using this size of packages. Considering the cost and trouble of waxing, the loss of honey by leakage, and the ease with which these Kegs can be handled and shipped, with an actual saving in original cost, it is apparent to all that they are the best. Prices:

5	gallon Kegs,	holding	a trifle	over	50 lbs.	....40c
10	"	"	"	"	100 lbs.	....60c
18	"	"	"	"	190 lbs.	....80c

When 25 or more kegs are ordered at one time, a discount of 10 per cent. given on the above prices.



These new kegs are designed and manufactured with special reference to my experience and suggestions from those who have used the fish, lard and syrup kegs of last season. The staves are Norway Pine; the heads are Oak; and the hoops are Hickory, and, as will be noticed by the accompanying illustrations, they are well bound. If the heads are painted, I will guarantee these kegs not to leak. It is not essential to paint them, but I believe it will pay to do so.



These PAILS have a full cover and are excellent for selling honey in a home market, and after the honey is candied, they can be shipped anywhere. All sizes, except the smallest, have a bail or handle, and when emptied by the consumer will be found useful in every household.
Assorted samples of the four sizes put inside of one another as a nest, price, 50 cts. by express. The following are the prices in quantities:

					Per doz.	Per 100.
Gallon,	holding	10	lbs.	of honey...	$1.80...	$12.00
Half Gal.,	"	5	"	" ...	1.50...	9.00
Quart,	"	2½	"	" ...	1.20...	7.00
Pint,	"	1¼	"	" ...	.75...	4.00

ALFRED H. NEWMAN,
923 West Madison Street, CHICAGO, ILL.

BEES Send to Chicago, Ill., for sample of **AMERICAN BEE JOURNAL**
Monthly, **$1** a year. Weekly, **$2.**

THIS PAPER may be found on file at Geo. P. Rowell & Co.'s Newspaper Advertising Bureau (10 Spruce St.), where advertising contracts may be made for it in **NEW YORK.**

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XIX. CHICAGO, ILL., OCTOBER 24, 1883. No. 43.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

The Northwestern Convention.

The annual re-union of bee-keepers in this city, which has just closed, was one of the most enthusiastic gatherings ever held in America. The presence of the Rev. L. L. Langstroth, the father of American apiculture, made it the more interesting to many who had never before seen that grand intellectual giant. We cannot better express the character of the Convention than to quote the following from the secretary's report of one of the speeches of Mr. Langstroth, when he said: "I believe that this Convention represents the largest number of large, practical and successful honey producers of any Convention that I have ever visited."

The language of all who attended the meeting was: "It is good to be here." There was no stiffness or reserve; no pet theories to propagate, nor personal antagonism to parade—only "a feast of reason and a flow of soul"—which was enjoyable, as well as highly instructive.

When Mr. Langstroth was invited to speak of "the honored dead, he grew eloquent, and for half an hour he paid a tribute of love and esteem to those who were his co-laborers while introducing the movable-frame principle to the American bee-keepers, which will never be forgotten by those who heard him!

The secretary's report of this may be found on page 527. The daily papers of Chicago had reporters present, and the following is what the *Inter-Ocean* of the next morning gave to its readers, on the subject:

> Mr. Langstroth made a few remarks on the subject of hives, combs, and other honey appliances. He said that they gave him too much credit for what he had done for the business. He spoke of other inventors, among them Major Hruschka, who invented the extractor, and what a help he was to the bee-keeper; also of the way he had invented the present movable-comb hive, Oct. 31, 1851.
>
> He referred to the honored dead who had done much for the bee-keepers of this country. Samuel Wagner, founder of the AMERICAN BEE JOURNAL in 1861, had translated several foreign works which proved of vast help to the bee-keepers.
>
> Moses Quinby, of Mohawk, N. Y., who had done so much to instruct and help others.
>
> Adam Grimm, of Jefferson, Wis., who was the great German bee-keeper.
>
> Richard Colvin, of Cleveland, Ohio, a man who had practically demonstrated the advantage of movable frames.
>
> R. C. Otis, of Kenosha, Wis., who had worked hard to demonstrate the success of the movable frame hive.
>
> Mr. Geo. Grimm arose and thanked the Rev. Mr. Langstroth for the eloquent remarks he had made on his (Mr. Grimm's) father.
>
> A rising vote of thanks was extended to the venerable minister. Amid the utmost, feeling the vote was passed unanimously.

President Miller, after putting that vote, attempted to make some remarks, but he was too much overcome by his feelings to do more than to assure Mr. Langstroth, that the proof that bee-keepers were conscious that they "owed him a larger debt of gratitude than they could ever pay," was evidenced by the rising vote of the entire Convention, and the tears which welled up into the eyes of nearly every one present.

Mr. Langstroth thanked the Convention for their manifestation of love and sympathy not only for himself, but also for his co-laborers who had passed away.

The number of members for this year is 97, showing a steady increase, year after year. Quite a number of ladies were present, and appeared to enjoy the meeting as much as the men, and when the time came for adjournment, it was so difficult for bee men to say "Good by," that they consumed a full hour in "social talk" and "parting words."

The next meeting, in October, 1884, will be looked forward to about as a child looks and longs for the holidays; and we have every reason to expect that meeting to be even a greater success than the present one. Chicago is the great centre of the West, and it is exceedingly easy to come to a meeting of this kind from all the surrounding States.

* * *

Home Market.—Mr. T. S. Bull seems to know how to sell honey at home. We find the following item in the *Vidette*, at Valparaiso, Ind. It is an excellent way to advertise honey:

> Mr. T. S. Bull, the honey man, has put in an elegant glass case filled with honey in Mr. Dillingham's grocery store on Main street. Mr. Bull's honey is a household word in every family in our city, and its excellence is well known. Drop in Dillingham's and look at the case.

* * *

☞ In the matter of paging the BEE JOURNAL cover, our readers will notice that we shall be obliged hereafter to page the entire paper through, consecutively. The following item from a Washington despatch will explain it. We have been notified by the Post-Office Department that if we continue to page the cover separately, we shall have to pay four times the amount of postage:

> The Post-Office Department insists that periodicals shall be numbered and paged consecutively, and the law is being enforced in this city, all matter not so numbered being classed as third class and charged at the rate of eight cents per pound.

* * *

☞ We regret to learn that Mr. E. F. Cassell, of Illinois City, Ill., was recently killed by attempting to get on the cars at Muscatine, Iowa.

* * *

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Honey Crop of Illinois.

We have received the official Circular No. 104, from the Crop Reports returned to the Department of Agriculture Aug. 1, 1883. From it we learn that the colonies of bees reported for 1881, were 86,633; for 1882 they numbered 131,633. The number of pounds of honey produced in 1881 were 618,947; in 1882, it had increased to 2,791,301, or over four times as much as in 1881, while the number of colonies had not even doubled. We shall look with interest to the official statistics for 1883.

The statistics, by counties, for 1882, are as follows:

COUNTIES.	Number of Colonies.	Pounds of Honey.
Adams	1,385	24,704
Alexander	260	1,960
Bond	624	8,420
Boone	454	11,623
Brown	794	12,460
Bureau	2,308	59,813
Calhoun	485	5,720
Carroll	273	5,695
Cass	990	16,680
Champaign	2,975	57,745
Christian	2,773	103,262
Clark	1,486	18,728
Clay	.....	......
Clinton	1,204	14,259
Coles	1,438	42,029
Cook	170	4,420
Crawford	1,516	15,070
Cumberland	1,408	17,784
DeKalb	580	22,420
DeWitt	752	30,850
Douglas	1,461	49,503
Du Page	87	1,785
Edgar	1,914	30,220
Edwards	701	6,839
Effingham	1,683	22,420
Fayette	1,651	33,239
Ford	715	16,213
Franklin	124	1,580
Fulton	3,009	71,461
Gallatin	500	5,600
Greene	1,262	23,694
Grundy	894	27,332
Hamilton	949	20,174
Hancock	2,492	53,301
Hardin	349	690
Henderson	880	27,143
Henry	2,027	56,681
Iroquois	2,767	65,306
Jackson	946	6,764
Jasper	1,566	21,674
Jefferson	1,665	19,879
Jersey	551	12,581
JoDaviess	219	7,650
Johnson	842	4,544
Kane	618	14,614
Kankakee	1,323	28,400
Kendall	514	18,695
Knox	2,050	70,667
Lake	.....	......
La Salle	2,278	85,891
Lawrence	1,405	22,755
Lee	.....	......
Livingston	2,256	58,732
Logan	2,845	74,673
Macon	2,168	48,591
Macoupin	1,919	46,263
Madison	1,024	19,240
Marion	3,736	23,011
Marshall	.....	.....
Mason	.....	......
Massac	282	2,242
McDonough	1,913	47,528
McHenry	725	23,809
McLean	3,987	142,165
Menard	1,205	3,573
Mercer	1,705	54,330
Monroe	208	......
Montgomery	2,292	61,116
Morgan	.....	......
Moultrie	1,325	26,012
Ogle	741	21,349
Peoria	1,504	48,723
Perry	376	4,548
Piatt	1,522	36,110
Pike	1,249	18,483
Pope	412	1,925
Pulaski	732	5,451
Putnam	713	27,685
Randolph	846	9,042
Richland	1,244	10,403
Rock Island	880	16,032
Saline	1,070	6,454
Sangamon	3,689	71,193
Schuyler	1,488	18,424
Scott	395	9,080
Shelby	3,604	57,914
Stark	711	25,185
St. Clair	1,874	30,750
Stephenson	1,146	35,718
Tazewell	1,461	31,721
Union	1,165	10,201
Vermilion	2,564	43,934
Wabash	812	12,208
Warren	2,123	109,707
Washington	1,180	13,447
Wayne	2,675	42,793
White	2,119	11,304
Whiteside	2,931	61,590
Will	915	20,959
Williamson	989	7,275
Winnebago	592	22,163
Woodford	1,004	17,308
Total	131,633	2,791,301

Foul Brood Investigations.

Prof. T. J. Burrill, of Champaign, Ill., proposes to make a thorough examination of the subject of foul brood, its cause and cure, and requests us to make the following announcement:

I am prepared to make some such study, and in the first place would like numerous specimens from different apiaries and localities to ascertain whether the same organisms are to be found in all or not. A small piece of the infected comb, together with any information as to the nature and virulence of the disease will be a contribution to the investigation. After finding what is the probable parasite, this must be separated and cultivated in a state of purity, and then try the effect on healthy brood. Doubtless this cannot be fully accomplished before sometime next year, but a beginning may be made now. I wish you would insert a note in the BEE JOURNAL, asking for specimens and information as to the nature and virulence of the disease, to be sent by mail to me at Champaign, Ill. A half dozen or so infected cells will suffice, and any small wood or tin box may be used. I have no bees, hence do not fear the infection. T. J. BURRILL.

☞ By the *Canadian Farmer* we learn that Mr. G. B. Jones' apiarian supply factory has been entirely burned up. The BEE JOURNAL extends its sympathy.

☞ We regret to learn of the death of Mr. J. Oatman, of Dundee, Ill., which occurred early in this month. He was the senior of the late firm of J. Oatman & Sons, well known to our readers. The sons now carry on the business from which the father retired some time ago.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., Oct. 22, 1883.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—The demand for honey is extremely slow, and our commission houses are too well supplied to expect anything else. Prices rule low. Manufacturers complain of slow business. Extracted honey brings 7@9c. on arrival. I have bought for less. Comb honey in good order, 12@15.

BEESWAX—Good yellow beeswax brings 27@28 cts.; offerings few.

CHAS. F. MUTH.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 17@21c. Dark and second quality, 14@15c.; extracted white clover in kegs and barrels, 9@10c.; dark, 8c.

BEESWAX—Prime yellow, 27@29c.

H. K. & F. B. THURBER & CO.

CHICAGO.

HONEY--Comb honey has sold freely for the past two weeks, and stocks are at present low. 1 lb. sections of white comb are bringing 18c.; 1½ to 2 lb. sections of same quality, 16@17c.; various sized sections of white comb, 15@16c. Extracted honey from 8@10 cts. per pound, according to body and flavor.

BEESWAX—Yellow, 32@33c.; dark, 25c.; medium, 30c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—There is a fair jobbing trade. Offerings are not large. Choice qualities command extreme figures. White to extra white comb, 16@20c.; dark to good, 10@13½c.; Extracted, choice to extra white, 8@9½c.; dark and candied, 6½@7½c.

BEESWAX—Wholesale, 27@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY — Quiet. Salable at appended figures, but generally held higher. Strained and extracted at 6¼@7c.; comb at 14c.

BEESWAX—Salable at 27c. for choice.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY—Comes very slowly and sells as fast as it comes at 18@19c. for best white in 1 lb. sections, and 17@18c. for 2 lb. sections. Second quality is very slow. Extracted usually sells very slowly in our market.

BEESWAX—None in Market.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—We quote our market at 18@20c. for 1 lb. white clover; 18@20c. for 2 lb. white clover. Extracted, 8@10c.

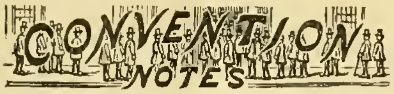
BEESWAX—We have none to quote.

BLAKE & RIPLEY, 57 Chatham Street.

KANSAS CITY, MO.

HONEY—Market is quite active for choice comb, and readily taken at 17@18c., not much distinction being made between 1 and 2 lb. sections. Dark and irregular shaped combs, 16@18c. Extracted slow and prices hardly sustained. Choice, in bulk, 9@9½c.; dark and dirty, 7@8c.

JEROME TWICHELL, 536 Delaware Street.



Northwestern Bee-Keepers' Society.

The Northwestern Bee-Keepers' Society met at Owsley's Hall, Chicago, Ill., on Wednesday, Oct. 17, at 10 a. m., President C. C. Miller in the Chair.

Secretary T. G. Newman read the minutes of the last meeting, which were approved. He also read the Treasurer's report, which was accepted and approved. On motion, the Rev. L. L. Langstroth, who was present, was made an honorary life member.

The following members then paid their dues:

James Heddon, Dowagiac, Mich.
T. L. Von Dorn, Omaha, Neb.
Dr. J. Oren, La Porte, City, Iowa.
T. S. Bull, Valparaiso, Ind.
H. D. Burrell, Bangor, Mich.
F. Wilcox, Mauston, Wis.
H. O. Morris, Tiskilwa, Ill.
A. S. Haskins, Lawrence, Mich.
Robert Cissna, Hageman, Ind.
C. L. Sweet, Glenwood, Ill.
James Kuhles, Howard, Ill.
E. Whittlesey, Pecatonica, Ill.
W. D. Angell, Odell, Ill.
J. M. Hyne, Stewartsville, Ind.
P. Morningstar, Wakarusa, Ind.
H. W. Lee, Pecatonica, Ill.
F. H. Hannah, Hinsdale, Ill.
H. Newhaus, Burlington, Wis.
G. B. Lewis, Watertown, Wis.
A. B. Miller, Wakarusa, Ind.
B. J. Miller, Nappanee, Ind.
Mark Davis, Lisle, Ill.
E. S. Hovey, Swanton, Iowa.
J. E. Hunter, Wyoming, Iowa.
Xenophon Caverno, Lombard, Ill.
A. Wecherts, Mattison, Ill.
Hugo Volland, Mattison, Ill.
John Hodgson, Jr., Pewaukee, Wis.
F. A. Snell, Milledgeville, Ill.
J. S. Hooton, New Carlisle, Ind.
G. H. Shirley, Richmond, Ill.
D. S. McKinstry, Grant Park, Ill.
T. F. Bingham, Abronia, Mich.
Otis J. Gandy, Churnbusco, Ind.
J. Scott, Oelwein, Iowa.
Wm. Burns, Buchanan, Mich.
S. M. Slade, Elgin, Ill.
James Forncrook, Watertown, Wis.
P. E. Marston, Beloit, Wis.
Wm. Camm, Murrayville, Ill.
E. Lucas, Kirkland, Ill.
Chas. Vail, Michigan City, Ind.
T. D. Ward, Lawton, Mich.
Wm. Blake, Buchanan, Mich.
J. Marvin, St. Charles, Ill.
Geo. Thompson, Geneva, Ill.
S. E. Gernon, Waukesha, Wis.
T. G. Newman, Chicago, Ill.
Dr. C. C. Miller, Marengo, Ill.
M. L. Trester, Lincoln, Neb.
E. T. Flanagan, Belleville, Ill.
W. Z. Hutchinson, Rogersville, Mich.
Emil J. Baxter, Nauvoo, Ill.
Capt. J. E. White, Englewood, Ill.
Geo. Bischoff, Burlington, Iowa.
J. S. Harris, Wheeler, Ind.
W. T. F. Petty, Pittsfield, Ill.
W. A. Carmack, Marengo, Ill.
F. W. S. Brawley, Chicago, Ill.
M. M. Baldridge, St. Charles, Ill.
Richard Hyde, Alderly, Wis.
P. J. England, Fancy Prairie, Ill.
John A. Jensen, Channahon, Ill.
A. T. Wright, Kokomo, Ind.
S. N. Black, Clayton, Ill.
A. Wicherts, Mattison, Ill.
R. G. Ardrey, Oakdale, Ill.
R. Johnson, Valparaiso, Ind.
Hugo Valland, Mattison, Ill.
D. Ryther, Somonauk, Ill.
E. F. Seafer, Chesterton, Ind.
Geo. Grimm, Jefferson, Wis.
J. C. Gould, Paw Paw, Mich.
D. G. Webster, Blaine, Ill.
A. H. Sherman, Bethel, Mich.
Frank McNay, Mauston, Wis.
L. H. Scudder, New Boston, Ill.
E. J. Oatman, Dundee, Ill.
L. C. Wemple, Rogers Park, Ill.
J. A. Green, Dayton, Ill.
Dr. J. A. Walker, Mason City, Ill.
P. P. Nelson, Manteno, Ill.
A. W. Kistenbroker, Oak Park, Ill.

LADY MEMBERS.

Mrs. P. J. England, Fancy Prairie, Ill.
Miss M. Hall, Sweet Water, Ill.
Mrs. Dr. Miller, Marengo, Ill.
Miss Emma Wilson, Marengo, Ill.
Miss S. Shibley, Richmond, Ill.
Mrs. L. Harrison, Peoria, Ill.
Mrs. White, Englewood, Ill.
Mrs. Bischoff, Burlington, Iowa.
Mary A. Davis, Lisle, Ill.
Miss Jennie Hayner, M. D., Chicago.
Mrs. A. C. Starkweather, Wilmington, Ill.
Mrs. F. Wilcox, Mauston, Wis.
Mrs. E. H. Whitney, Chicago.
Mrs. J. Heddon, Dowagiac, Mich.

President Miller started the ball to rolling by reading from the question box, "What kind of bees are best?"

Geo. Thompson, Geneva, Ill., thought that the Syrians, in their purity, undesirable, but considered a judicious cross between them and the Italians an excellent bee. Syrians are very prolific, breed up quickly, and, hence, are very desirable in localities where the main honey harvest comes early in the season.

T. F. Bingham: You speak of a judicious cross, will you please tell us what you mean?

Geo. Thompson: One-third Syrian, the remainder Italian.

Rev. L. L. Langstroth: I have noticed that the Italians stop breeding early in the season. Mr. D. A. Jones told me that he preferred a cross between the Italians and Syrians.

James Heddon: If you were going into bee-keeping again, is it your opinion, Mr. Langstroth, that you would have a pure variety or a cross?

Rev. L. L. Langstroth: It is my opinion that I should prefer a cross.

F. Wilcox: I cannot get the Italians into boxes so readily as I can the blacks.

James Heddon: I have never had a Syrian or Cyprian queen in or near my apiary, and, until we can get better reports from them than we have, I never shall. I see no advantage in very early or late breeding. My bees do not die any more in winters when they cease breeding early in the season. Neither do I consider extra prolificness of the queen anything of which to boast. Large colonies of young bees, in the fall, winter no better; sometimes not so well.

Wm. Camm: I prefer pure Italians. The Syrians do not properly ripen and seal the honey, and in no manner do they show a superiority over the Italians. Have tried crossing them with the Italians. A Syrian queen mated with a black drone produces a more amiable bee than an Italian queen mated with a Syrian drone, but I never saw a gentle Syrian with any system of management.

E. J. Baxter: With me the Cyprians have no advantages over the Italians, while they are very viscious, even after the hive is closed, they will follow a long distance to sting. I prefer pure Italians. I have tried blacks, but do not like them. I like to have bees breed late in the season, but think extra prolificness of no account.

James Marvin: I prefer the Italians.

James Heddon: If there is a member present who has gentle Syrians or Cyprians, I should be glad to hear from him.

J. A. Green: I have Syrians bred from a queen obtained from A. I. Root, and they are gentle.

James Heddon: There is one difficulty in deciding this question, and that is, all breeders are not honest. And then all bee-keepers cannot distinguish one variety of bees from another. For instance, in 1881, a noted breeder sent me a Syrian queen, and wished me to send him in return a queen of my strain of bees. Now, I did not want the queen in my yard, and I hardly knew what to tell the breeder, but I finally decided, for the benefit of the fraternity, to lay aside my conscientious scruples. What did I do? Well, I will tell you. I took the Syrian queen and put her into one of my shipping cages and returned her, together with a long letter, asking the breeder to give my strain of bees a careful trial, and see if they did not compare favorably in marking, industry, general character, etc., with other bees. He reported a careful examination, and never once suspected they came from him. If I were producing extracted honey, and nothing else, I should be satisfied with the dark, leather-colored Italians, but for the production of comb honey I prefer a cross between this variety and the brown German bee.

J. A. Green: I see no difference in the appearance of Italians and Syrians, but the Syrian queen that I had was one of Mr. Root's selected tested queens.

J. C. Gould: My experience has been that pure Syrians are not so irritable as a cross between Italians and blacks. Queens in Italian colonies are more readily found.

James Heddon: I have no trouble in finding queens in my hybrid colonies.

T. F. Bingham: The purer my Italians are, the least liable are they to swarm. My hybrids swarm most.

James Heddon: The same colony does not behave the same, nor store honey with the same industry each season; why is it?

F. Wilcox: It may be because they are not strong enough at the proper time.

James Heddon: That is not the point; colonies are exactly alike, so near as we can discover, and yet one colony yields an excellent surplus, another none; why is it?

C. C. Miller: It may be caused by a difference in the age of the queen.

James Heddon: I think not; bees supersede their queen when she becomes too old. In regard to varieties, I tried the "golden" Italians, but did not like them so well as the blacks. I tried the dark Italians, and liked them better than either, but I prefer a cross between the dark Italians and the blacks. I do not want the bees to be too black. Most of the black bees throughout the country are the brown German variety.

The following question was handed in for discussion, by Mrs. L. Harrison: "Is it the opinion of this Convention, that legislation is necessary to protect bee-keepers against the ravages of foul brood?"

T. L. Von Dorn remarked that he did not think it necessary, as an indictment could be easily obtained before any grand jury against any one who persisted in keeping such a loathsome disease about his premises.

Dr. S. M. Slade said that it was a disease most-dreaded, and protection should be given against its spreading.

T. G. Newman remarked that special legislation was very often inoperative, and remained a dead letter on the Statute books, but safe guards should be thrown around bee-keepers against this malady. It was a *crime* to keep such a loathsome disease in an apiary, especially if there were any likelihood of selling bees, to endanger its spreading. He believed that it was the safest way to destroy all such colonies, and thus root out the evil.

On motion, the meeting adjourned to meet at 2 p. m.

AFTERNOON SESSION.

Met at 2 p. m. Dr. Miller in the Chair. The first question brought up was that of queen-rearing, which soon branched off, taking a wide range; for instance, James Marvin said that he had clipped the queens wings this season, had never done so before, and would never do so again.

E. J. Oatman: We cannot afford to tolerate poor stock; we must have the best. Old queens do not furnish the best bees. I destroy queens before they become too old.

James Heddon: If the offspring of young queens is the best, we want it, for it requires just as much honey to rear a lazy bee as to rear a smart one.

Dr. Miller: How do bees know when to supersede a queen? Is it because she lays a fewer number of eggs, or how is it? How do the bees know when to supersede?

Wm. Camm: I had a queen that did good service five years, and I presume that she might yet be doing so, if she had not been smothered in a snow bank.

S. M. Slade: I always allow my bees to swarm, and have arrived at the conclusion that there is more in the operator than in the queen.

Rev. L. L. Langstroth: Bees do not, I think, supersede their queens simply because the queen does not lay enough eggs to suit them. I once put an old queen in several different colonies, and they all tried to supersede her. I then placed her in a nucleus, and that also tried to supersede her. I would like to ask if any one has noticed that black bees are less liable than Italians to supersede their queens. I have found it so. They seem to have more affection for their queen; they are fairly distracted when she is removed. Italians are much more apt to supersede their queens. I have also noticed that the superseding queen is an excellent one.

Wm. Camm: I had two superseding queens, this season, and they were very prolific.

Rev. L. L. Langstroth: We can tell the age of queens by their color. A young queen is bright-colored and fresh looking, more so the first year than ever afterwards. We cannot look at a queen and say, to a certainty, that she is of a certain age, but we can make a pretty close guess.

R. A. Burnett, a commission merchant of Chicago, was next introduced, and, to questions, replied in substance as follows: One-pound sections sell the best. I have handled a few one-half pound sections, but I am of the opinion that if they must be sold at a very much higher price than the one-pound sections, it will not be advisable to use them. Have handled glassed sections, but they are very unsalable. A section that weighs a fraction less than a pound is better than one that over-runs in weight, as we are always asked to "throw in" the extra ounces, while to throw off a few cents because the section is under weight, always creates a feeling of satisfaction. A thin comb of honey is more salable than a thick one weighing the same, as the larger surface of comb makes the amount of honey appear larger. Dark honey is more salable in the extracted form; in fact, it should never be put upon the market in combs. Here the discussion branched off into adulteration of honey.

R. A. Burnett: I have kept it before the public that I sold only pure honey, and my sales have increased. I tell my customers that when they get honey in the original packages, they can be almost certain of getting pure honey, and it is in that shape that I try to sell it.

James Heddon: I think it impossible for producers to profitably adulterate honey.

E. Baxter: I do think it can be done.

James Heddon: Will you please tell us, Mr. Baxter, how much you get for your extracted honey?

E. Baxter: Eight or nine cents.

James Heddon: How much did it cost you to produce it?

E. Baxter: Perhaps 10 per cent. of its selling price.

James Heddon: Do you think, Mr. Baxter, that you could afford to adulterate, with glucose, honey that cost you only 2 cents a pound?

There was too much of a laugh to clearly hear Mr. Baxter's reply.

S. M. Black: Adulterated honey is easily discovered.

E. Baxter: I am well acquainted with the properties of glucose, and the injuries that it causes; its effects are slow. I think, in time, that it will be so made that it will be wholesome.

T. G. Newman: For a long time it has been impossible to sell honey here in Chicago, because of its adulteration years ago. We have fought glucose as a deadly enemy, and at last we have it under our foot; let us keep it there. I believe it a sin to have it go out to the world that bee-keepers can or will adulterate their honey. The name of a bee-keeper when placed upon a package of honey, should be a synonym for purity—a guaranty for the straight and pure article. No glucose should ever be tolerated in or around his apiary, for it would destroy confidence to be in possession of the vile trash for any purpose.

Rev. L. L. Langstroth referred to Mr. C. F. Muth, and the large business that he had built up by being strictly honest, and dealing in pure honey. One man says that glucose can be made pure; perhaps it can, but it is not done, unless some one writes for a sample to analyze, or something of that kind, when a sample is especially prepared and sent to him.

James Heddon: Heat effects glucose and honey in a different manner. Heat a glass of pure honey, and at the same time one containing honey of suspected purity, and if glucose is present, the ropy, stringy, gluey appearance of that containing the glucose will be easily seen.

J. L. Harris: My experience is that customers can tell the difference between adulterated and pure honey. That is, after using adulterated honey, they soon tire of it and want no more.

Wm. Camm: I agree with Mr. Newman, but we cannot afford to ignore facts. I am happy to be able to say that it is a fact that every bee-keeper is opposed to adulteration.

M. L. Trester: Many purchasers of honey store it in a damp place, where it will absorb water and will sour, and then they say that it is adulterated. The label should explain this matter. Honey appears to much better advantage when stored in flint instead of ordinary glass vessels. Producers should establish a reputation in their home market. No stranger can come into my market and sell honey.

At this point the convention was favored with some music and the singing of some "bee songs," such as "Charley the Bees are Swarming," etc., by Mr. and Mrs. F. Edgecombe, of Chicago, Prof. Coffin presiding at the organ.

A vote of thanks to Prof. Coffin and Mr. and Mrs. Edgecombe was unanimously passed for the musical entertainment.

Then followed the election of officers which resulted as follows: President, Dr. C. C. Miller, Marengo, Ill.; Vice-President. Mrs. L. Harrison, Peoria, Ill.; Secretary, W. Z. Hutchinson, Rogersville, Mich.; Treasurer, T. G. Newman, Chicago, Ill.

Upon motion of T. G. Newman, it was decided that, at future elections, to save time, the Secretary should furnish printed ballots, with blanks left for names of persons to be elected, and so arranged that all the officers could be elected at one ballot.

The meeting then adjourned to meet at 7 p. m.

EVENING SESSION.

The first subject discussed was that of "Over-stocking a Locality."

The greater part of the time set apart for this discussion was taken up in listening to reports from members regarding the number of colonies that they pastured upon certain tracts of land. Dr. Miller finally asked how many members present had kept more bees in one locality than could be kept with profit. Ten members stood up. The discussion that followed brought out the idea that, as a general thing, an apiary should not contain more than 125 or 150 colonies, and the field should be clear three miles in each direction.

Dr. Miller: When our locality becomes over-stocked, what shall we do? Shall we sell some of our bees? Shall we plant for honey, or what shall we do?

F. Wilcox: Plant Alsike clover.

A Member: Upon what soil do plants furnish the most honey?

L. H. Scudder: One plant in my locality does best upon light sandy soil.

A Member: What plant will it pay to cultivate for honey alone?

Geo. Thompson: Sweet clover.

J. A. Green: In my locality, sweet clover grows upon the river banks, where there is little else except pure sand.

Wm. Camm: I prefer figwort. Sweet clover will not grow upon every soil. I tried some upon clay, and it did not grow. I have sowed sweet clover in the spring; it made a fine start, bnt the drouth killed it. Sowed some in the fall with better success. By enriching the ground, I have made sweet clover blossom. I consider it an advantage to cut it in June.

James Heddon: There is one kind of soil in which sweet clover will grow every time, and that is gravel.

James Marvin: My neighbor, M. M. Baldridge, had, in one season, 75 acres of Alsike clover, and from it my bees gathered a large crop of very superior honey.

James Heddon: Is there any one present whose income has been increased by planting for honey alone?

Dr. Miller: My bees fairly revel upon my figwort, but I cannot be certain that it has paid me; because bees work upon blossoms, is no proof that it pays to raise them.

Wm. Camm: After harvesting a crop of oats, I have plowed the field and sowed it to buckwheat, from which I have obtained a crop of honey more than sufficient to pay the expense.

S. N. Black: And I have sowed buckwheat in a corn field, after it was cultivated the last time, and received from it enough honey to make it pay.

T. L. Von Dorn: I have a neighbor who has had large crops of honey from rape.

James Heddon: I have a student from Nebraska, and he says that his father regards matrimony vine as a great honey producer.

T. L. Von Dorn: I agree with this gentleman.

The meeting adjourned to meet at 9 a. m.

MORNING SESSION.

The Convention met at 9 a. m. according to adjournment. President Miller announced for discussion "Surplus receptacles."

As the subject seemed a little slow in starting, President Miller said: Who raises extracted honey? Up with your hands. Now, who raises comb comb? Two-thirds of the members made a specialty of comb honey.

Dr. Miller: Now, who uses separators? To the surprise of some, it was found, upon voting, that three-fourths of the members could get along without separators.

Mrs. L. Harrison: If we sell at home, there is no necessity of using separators, but if we have to crate and ship our honey, it is a different thing. I have my honey stored in boxes.

W. Z. Hutchinson: In regard to crating and shipping honey built without separators, please allow me to say that I, this season, raised 2,600 pounds of comb honey without separators, crated every pound, shipped it by freight to the State Fair at Detroit, shipped it back by freight, and carried it 12 miles in a lumber wagon to our County Fair without the loss or breakage of a single comb.

As Dr. Oren came in at this point, the President thought it best to resume the subject of pasturage, in order that Dr. Oren might tell more about a honey plant of the helianthus order, which he had on exhibition. It blossomed in September, and continued in bloom until cold weather, while the amount of honey gathered from it was very great.

Geo. Grimm: I have had considerable experience with the same plant. It grows along the river bank, and we often haul our bees 30 or 40 miles in order that they may work upon this plant.

Wm. Camm: I have had experience with this plant, and find it valuable. I have tried Dr. Tinker's golden honey plant, and with me it is worthless.

The question of surplus receptacles was again taken up.

James Heddon: No one considers sections cratable unless the combs do not touch, but the thicker the combs, provided that they do not touch, the better, for the reason that thick combs are not so easily broken out. Honey raised without separators is thicker, and better fastened to the wood around the sides. I want no sections with closed tops, but those with open top-bars clear across. With closed top-bars the bees have no guide, and do not know where to have the edge of the comb. With open top-bars they do have a guide. Where the openings in the top and bottom bars do not extend clear across, those little projecting corners are liable, in crating honey or taking it from the crate, to gouge into the sides of the neighboring combs. To get straight combs the sections should be filled with Given foundation, the hives should stand level, except slightly raised at the back. Bees having a dash of German blood are a great help in getting straight combs. To get sections holding half-pounds, I reduce them in width and thickness. Half-pound sections ship better, because they are smaller. One of my customers found the half-pound sections very salable; other sizes were a drug as long as they lasted; the same was not always true. I have tried wide frames, and the case method upon a large scale, and I expect to burn up the wide frames, and use the cases exclusively.

F. Wilcox: In some colonies I can get straight combs, in others not. Strong colonies build straight combs, weak ones are not so apt to.

Dr. Miller: Too thin foundation sometimes causes crooked combs. Foundation made upon a press is less liable to warp or bend than that made upon a roller mill. I do not like the Van Deusen foundation; it is too thin, and curls too much. I wish to make a point, that the kind of foundation made has much to do with the success of crating sections.

Rev. L. L. Langstroth: I believe that this Convention represents the largest number of large, practical, successful honey producers of any Convention that I have ever visited. Mr. Langstroth here gave a long and interesting account of how the invention of the movable comb hive was brought about, and then spoke with much feeling of

THE HONORED DEAD.

Mr. Samuel Wagner was first mentioned. He told how Mr. Wagner had taken him by the hand and helped him. How fair, square and liberal he was. His library was full of bee-keeping works, and free access was given to all who wished to read them.

Moses Quinby and Mr. Langstroth published their works at about the same time, and it was a great source of pleasure to know that they so nearly agreed. Mr. Quinby had learned how to make money at bee-keeping, even when using box hives. Mr. Quinby had told Mr. Langstroth that the happiest moment of his (Quinby's) life was when he read to his family, from Mr. Langstroth's work, commendatory words in regard to himself.

Adam Grimm had done very much for bee-keeping, had shown that a fortune might be amassed in the business. Mr. Grimm had once visited Mr. Langstroth, and his greeting was: "Hail, great American bee-keeper!"

Richard Colvin had spent thousands of dollars in helping forward bee-culture.

R. C. Otis had, perhaps, been the most instrumental of any one in disseminating movable combs throughout the country. Had it not been for him, movable comb hives might now be but little known. He was a kind-hearted man, and would leave everything else and care for his old mother.

At the close of Mr. Langstroth's address, Mr. Geo. Grimm, Adam Grimm's son, arose and thanked him for the eloquent words spoken of his father, and moved that a vote of thanks be given Mr. Langstroth for his loving words in regard to those who were dead and gone, which was unanimously carried, while heartfelt tears welled up in many eyes.

While a statistical table (which appears elsewhere) was being prepared, Mr. Langstroth exhibited to the members a bottle of alcohol containing a drone and two workers of *Apis-Dorsata*, which had been given him by Mr. D. A. Jones. While the workers were larger than our queens, the drone was not larger than our drones, and Mr. Langstroth expressed a hope that it might be possible that a cross might be obtained by the mating of an *Apis-Dorsata* drone with one of our queens.

After the statistical table had been prepared, the Convention adjourned to meet at 1:30 p. m.

AFTERNOON SESSION.

Meeting called to order at 1:30 p. m President Miller in the chair. The subject first taken up was "Foul brood."

Dr. Miller said, that the disease could be discovered by the odor, and by the appearance of the dead brood. There were three remedies. First, cremation; secondly, the starvation plan, and thirdly, the use of salicylic acid.

Mr. Marvin and others advocated total destruction as the only sure remedy, and all agreed that great care was necessary that the disease might not spread.

The subject of "Wintering" was then taken up.

J. E. Hunter: I put my bees in the cellar when steady cold weather comes, and winter without loss. I take them out when it becomes so warm that I cannot keep the bees quiet. I have both upper and lower ventilation, and aim to keep the temperature at 45°.

Dr. Miller: Thermometers vary; bee-keepers should look out for this.

E. J. Baxter: I wintered 110 colonies, last winter, out-of-doors without loss. My hives are not shallow. I always try to have good, strong colonies, and plenty of good honey for stores. I leave in only eight combs, filling up the empty space with dry leaves, spreading a mat over the top of the frames.

E. J. Oatman: I shall winter 600 colonies out-of-doors, and 11 in the cellar. I put those 11 in the cellar because they are in shallow hives. I prefer out-door wintering with the hives protected by chaff; and I do not unpack them until all danger from cold is over. I prefer confectioners' A sugar to all other stores for wintering. We are not always certain that the honey is pure; it may be

BEES AND HONEY FOR 1883.

NAME AND ADDRESS.	COLONIES.		HONEY CROP-lbs		HONEY UNSOLD.	
	Sprng	Fall.	Extr'td	Comb.	Extr'td	Comb.
Dr. C. C. Miller, Marengo, Ill.	172	251	....	11,000	....	9,000
James Heddon, Dowagiac, Mich	130	300	4,000	4,000	4,000	3,500
Geo. Grimm, Jefferson, Wis.	350	500	400	7,500	....	700
J. M. Marvin, St. Charles, Ill.	120	300	6,000	5,000	2,000	....
Oatman Bros., Dundee, Ill.	408	611	....	27,000	....	10,000
L. H. Scudder, New Boston, Ill	65	170	....	6,000	....	5,200
W. Z. Hutchinson, Rogers', Mich.	75	100	2,000	2.600	500	....
T. S. Bull & Sons, Valparaiso, Ind	140	200	10.000	500	7,000	300
T. L. VonDorn, Omaha, Neb.	33	37	450	2,000	300	....
E. Lucas, Kirkland, Ill	85	130	1,000	5,000	....	....
Mrs. L. Harrison, Peoria, Ill.	47	112	1.000	5.000	....	5,000
Jos. Kuhles, Howard, Ill.	10	32	240	173	....	....
Dr. S. M. Slade, Elgin, Ill	16	31	700	700	....	350
Wm. Camm, Murrayville, Ill.	50	100	1,500	1,500	1,000	1,000
Wm. Burrows	70	140	....	3,500	....	1,500
Wm. Blake, Buchanan, Mich.	62	125	500	4,500	....	1,200
Rev. L. L. Langstroth, Oxford. O	3	14	200	....	....	....
L. A. Secrest	16	20	150	20	60	....
Wm. A. Carmack, Marengo, Ill	3	7	5	100	....	....
H. D. Burrell, Bangor, Mich.	118	148	200	4,000	100	500
Philip P. Nelson, Manteno, Ill.	34	52	500	1,800	200	340
Richard Hyde, Alderly, Wis.	85	125	10,000	2,500	....	2,500
Geo. Bischoff, Burlington, Iowa	26	60	600	400	300	100
Frank McNay, Mauston, Wis.	78	140	1,500	4,000	1,000	1,500
J. C. Gould, Paw Paw, Mich.	9	23	1,200	....	....	....
J. J. Hulbert	35	70	300	750	....	....
P. J. England, Fancy Prairie, Ill	20	34	1,900	100	....	....
S. E. Vanneter	35	68	500	800	....	400
S. E. Gernon, Waukesha, Wis.	80	130	1,700	6.200	1,000	3,000
J. Hodgson, Jr., Pewaukee, Wis	28	76	800	2,000	....	....
C. Schrier, Peotone, Ill.	29	48	250	2,000	....	500
J. E. Hunter, Wyoming, Iowa.	108	145	2,000	2.000	600	500
Jas. Forncrook, Watertown, Wis	6	21	....	200	....	200
Robert Cisna, Hageman, Ind.	54	98	900	600	....	100
S. N. Black, Clayton, Ill.	24	60	....	1.800	....	300
C. W. McKown, Gilson, Ill.	80	120	4,000	3.100	....	300
John A. Jensen, Channahon, Ill	64	104	9.800	....	4,000	....
F. H. Hannah, Hinsdale, Ill	12	28	....	300	....	60
C. L. Sweet, Glenwood, Ill.	90	135	1,500	300	500	200
Chas. Anderson	43	91	4,090	2.000	....	....
J. M. Hyne, Stewartsville, Ind.	48	95	800	700	....	100
G. H. Shibley, Richmond. Ill.	100	190	1,000	5,000	400	3,500
D. S. McKinstry, GrantPark, Ill	24	42	1.050	1,200	900	800
E. F. Schaper	45	100	1.800	200	500	50
L. C. Wemple, Rogers Park, Ill.	26	62	100	900	75	500
M. L. Trester, Lincoln, Neb.	78	135	5.300	300	2.600	200
T. D. Ward, Lawton, Mich.	34	65	600	1,200	300	800
J. L. Harris, Wheeler, Ind.	26	80	1,500	....	....	....
John Hoover, New Boston, Ill.	55	100	300	3,000	300	3,000
R. Johnson, Valparaiso, Ind.	22	47	2.000	400	400	....
A. Wicherts, Mattison, Ill.	38	80	1,000	1,000	300	400
W. T. F. Petty, Pittsfield, Ill.	37	105	3,000	....	1,500	....
D. G. Webster, Blaine, Ill	140	190	50	5,500	....	5,000
Jacob Ebersole	54	76	....	1,500	....	....
X. Caverno, Lombard. Ill.	8	20	700	50	200	....
A. P. Lanterman, Chicago	4	7	200	20	....	....
H. W. Lee, Pecatonica, Ill.	180	200	1,500	3,500	1,000	500
E. Whittlesey, Pecatonica, Ill.	50	70	500	2,000	200	1,000
J. S. Hooton, New Carlisle, Ind	20	30	700	300	500	....
E. S. Hovey, Swanton, Iowa.	35	55	1,050	1.600	....	300
Dr. Jesse Oren, LaPorte C, Iowa	140	167	2,700	4.500	200	1,000
F. A. Snell, Milledgeville, Ill	90	115	2.700	1,600	200	200
James A. Green, Dayton. Ill.	137	175	6.500	2,500	5,000	1,500
H. Newhaus, Burlington, Wis.	25	103	2,674	1,349	2,674	949
Albert Potter, Eureka, Wis.	43	93	....	2,500	....	2,500
Otis J. Gandy, Churubusco, Ind	55	80	100	5.000	100	1,500
Dr. J. A. Walker, MasonCity, Ill	45	72	....	2,000	....	1,000
H. O. Morris, Tiskilwa, Ill.	42	68	1,600	1,650	300	550
R. G. Ardrey, Oakdale, Ill.	35	56	1,500	300	700	200
W. D. Angell, Odell, Ill.	17	21	....	800	....	600
A. S. Haskins, Lawrence, Mich	11	33	200	500	150	400
Emil J. Baxter, Nauvoo, Ill.	123	185	22,000	1,000	21,000	800
F. Wilcox, Mauston, Wis.	85	125	300	4,100	300	2,500
Mrs. A. C. Starkweather	50	80	400	1,000	....	800
T. F. Bingham, Abronia, Mich.	60	92	5,000	....	3,000	....
Total,	4.877	7,970	138,529	178,112	65.359	78,899

gathered from cider mills or something of that sort. The syrup should be made in the proportion of five quarts of water to twenty pounds of sugar, and it is better that it be fed in time to be sealed over before cold weather. I began feeding Sept. 11. I would commence feeding as soon as the honey flow is over. I would not feed in winter unless as a last resort to prevent starvation.

Wm. Camm: I never lost a colony that went into winter quarters in proper condition. I never extract honey from the brood-chamber. I do not want any sugar; think honey good enough. I do not care for pollen; give the bees room enough to store plenty of honey, and they are all right.

Dr. Oren: What would be the result of confining bees to a diet of pollen?

E. J. Baxter: Mr. Dadant has never tried to avoid pollen, and has always had good success.

S. M. Slade: During three or four years I wintered my bees without loss in a cellar, but one year 3 or 4 colonies became restless and ate up all their stores and died of starvation. At last their came a winter in which my bees and those of my neighbors died. It followed a season in which we had no surplus honey.

Dr. Oren: I had a weak colony of blacks that had no queen in August. When I put them in winter quarters there was not more than a pint of bees, but I gave them an Italian queen. In the spring all the black bees were gone, and in their places were Italians; plenty of them. They wintered well.

E. J. Oatman: I think that pollen is at the bottom of much of our winter troubles. One reason for feeding sugar is to cover the pollen, so that the bees cannot get at it.

James Heddon: All our losses are nothing compared to that caused by dysentery. Now, what causes dysentery? Does any body know? Has laying a little stick over the frames got anything to do with it? Has turning back the quilt one-eighth of an inch at the back of the hive anything to do with it? Has a little chaff here, and a little chaff there anything to do with it? Has ventilation anything to do with it? Do not bees die out-of-doors and in the cellar, when they are ventilated and when they are not ventilated, when they are kept dry and when they are kept in a damp cellar, and do not they live sometimes under just these same circumstances? Confinement is not the primary cause of dysentery, neither is cold, nor confinement. Now, what is it? It is my opinion that the trouble is in the food. Pollen is what causes the trouble. Grains of pollen are often floating in the honey. Pollen is a needed food in building up tissue, as in rearing brood or repairing the waste tissue when bees are laboring in the field, but it is not needed when bees are quietly clustered in the hive during the winter. A heat producing food is then needed, and for this purpose pure cane sugar is better than honey. It is also more completely digested, leaving a smaller amount of residue. This pollen theory is the only one that will fit all cases. A man puts his bees in the cellar, or in a clamp, and leaves them there five or six months, and they come out in fine condition; the confinement did not bring on the dysentery did it? The next winter, with even a less amount of confinement, they may all die. Dampness does not cause dysentery; if it does, why did it not kill that man's bees who kept them in so damp a cellar that the hives were dripping with moisture, and a large number of combs blue with mold? If cold causes dysentery, why is it that bees often winter best in a long, steady, cold winter where the mercury often goes down below zero, and stays down a long time. Cold, dampness, and confinement may be aggravating, but they are not primary causes. Pure cane sugar is the remedy for their troubles.

E. J. Baxter: I have quieted restless colonies by giving them more ventilation.

Rev. L. L. Langstroth: I cannot think that the Creator would make things so antagonistic to each other. The instinct of the bee teaches it to gather, store and eat pollen; hence, it should be healthful. Cold does not always cause dysentery. I have known bees winter successfully, in a severe winter, when the hives were raised from the bottom-board, and in some instances where the bottom-board had fallen off entirely. I have had persons experiment by hanging up a colony, combs and all, of course, but without any hive, in large boxes, or in a smoke house, and, although the winter was severe, they wintered perfectly.

James Heddon: I would say to father Langstroth, that I do not claim that the bee will eat pollen, during the winter, from instinct, but they are sometimes compelled to eat it.

The next topic of discussion was "Comb foundation."

E. J. Oatman: I prefer the Given to all others. Think 7 square feet to the pound about right.

James Heddon: I prefer the Given foundation; for sections I would have it about 8 feet to the pound. For putting foundation in brood frames, the Given has no competitor.

E. J. Baxter: That Mr. Dadant has, the past season, made 45,000 pounds of Dunham foundation, is something in its favor.

Geo. Grimm: I have laid aside the Dunham mill for the Given press. I prefer the Given foundation both for surplus and for brood combs. The base of the cells are always thin, even in a heavy sheet of foundation, and as it is the base only that receives the pressure, the side walls are soft.

Dr. Miller: I like the Given foundation best, but I have noticed that it is not always of uniform thickness, some parts of the same sheet being thicker than others.

James Heddon: The base is so very thin in the Given, that any difference is more perceptible.

T. F. Bingham: As the bees are obliged to add some wax in order to finish the comb, what material difference does it make if some parts are a trifle thicker than others? I think that the excessive pressure of some mills makes the foundation too hard; and the bees are thus liable to thin the base if it needs it.

The next subject was "Fastening Foundation in Sections."

E. J. Baxter: I fasten it in by pressing it in with a knife.

Dr. Miller: I prefer the Clark fastener.

F. Wilcox: I never tried the Parker fastener—use the Clark. In removing the section, I pull out one corner first, which answers the same purpose as the sliding-back movement of the Parker. I fasten foundation in the brood frames with a putty knife.

Dr. Miller: I do not twist the section in removing it from the Clark fastener, and the starters do not fall out.

James Heddon: No other fastener except the Parker has that sliding-back movement, and, without that, I consider no fastener as perfect.

Geo. Grimm: I fasten mine with melted wax and a brush; I keep the wax at the proper temperature by means of a lamp.

Upon the subject of "Purifying Wax," Mr. Black said: Melt it with large quantities of water; let it cool slowly while upon the water, and all impurities will settle to the bottom.

The question was asked: Is it profitable to prevent after-swarming?

F. Wilcox: Yes.

Mr. Black: It depends upon circumstances. Second swarms are often the best; especially is this so if they come during a good flow of honey, when they can build up quickly. The succeeding year they are the very best of colonies.

James Heddon: Some, to prevent after swarming, cut out the queen-cells. I object to this. There is something in nature that hatches the best queen first. Now, I will tell you how I manage second swarns. I hive them upon frames of wired foundation, and place the hive containing them by the side of the old colony. As soon as the queen is fertilized and laying, I shake the whole swarm down in front of the old hive, and put away the drawn-out foundation for future use. All the bees being the offspring of one queen, they do not quarrel. I have tried uniting bees; some seasons they did not quarrel, others they did.

Geo. Grimm: I hive an after swarm, and place it by the side of the old colony, and then at evening shake it down in front of the old hive.

James Heddon: Yes, I have tried that plan, but the next day out came the swarm again.

"Prevention of robbing and uniting bees."

Rev. L. L. Langstroth: If it is in order, I should like to tell how Mr. D. A. Jones manages robber bees. He has found that one dry bee can conquer a large number of wet ones; hence, when there is any fear that robbers may over-power a colony, he piles hay in front of the entrance, then wets some hay and puts over this, and the result is, that the robbers become wet and are easily over-powered. Mr. Langstroth had also successfully united colonies that were inclined to quarrel after he tried to unite them, and it was done by wetting with sweetened water, the colony that was at home. The intruding colony had no desire to fight.

The Convention adjourned to meet again in Chicago upon the Wednesday and Thursday of the last week of the Exposition, when held in 1884.

W. Z. Hutchinson, *Sec.*

CORRESPONDENCE

For the American Bee Journal.

Worker Bees in Queen-Cells, etc.

G. M. DOOLITTLE.

On page 433, I see that Mr. Heddon is puzzled by that "Curious freak of bees," given by Mr. Rickenbacher.

Mr. R. says that, while cutting out queen-cells, one of them fell to the bottom-board unnoticed, and in it he afterward found an old dead worker bee. As he says he did not notice it at the time it fell to the bottom-board, I take it for granted that it did not fall there, but that the bees built it there, for I have frequently found queen-cells built by the bees in all sorts of places in the hive, some of which was more strange than a queen-cell on the bottom-board to the hive.

Mr. R. further states that, at the time he cut out the queen-cells he grafted in a cell from an Italian colony, the queen from which went out with a swarm a few days afterwards. He then asks why the bees sealed the cell with the dead worker in it, and then swarmed. Here again I take it for granted that the queen-cell with the dead worker in it had nothing to do with the swarming of the bees, for a swarm of bees know whether a queen-cell contains an embryo queen which is alive or not, just as well before it is opened as Mr. R. knew what was in the cell after he had opened it. I have seen this verified in many instances, when queen-cells have been chilled so as to kill the young queen.

The way the worker came in the cell was this: As soon as the young queen emerged from the cell, the worker went in to partake of a royal jelly diet, as bees always will do. While the bees were in the cell, the cap to the same was pushed shut by some of the bees, when it was fastened there, thus securing the unfortunate worker a prisoner, after which she died; hence was found dead. Many of such cases have come under my notice.

Now, why did the bees swarm with the Italian queen? Probably from one or two reasons, the most likely of which is that this queen from the cell on the bottom-board hatched about the same time that the Italian queen did (from the cell inserted). Of course one must be killed, and the bees saw fit to keep the Italian and kill the other. The Italian queen became old enough to take her wedding flight, and the bees (a swarm) went out with her, which is no uncommon occurrence, by any means. The other reason would be, that this queen from the cell on the bottom-board hatched and was killed as before, while, in some out-of-the-way place, was a queen-cell not so nearly mature, which escaped the notice of Mr. R. As this cell came to maturity later, the bees swarmed after the few days, under the same conditions as a second or third swarm issues, and both queens went with the swarm, as is often noticeable, especially with third swarms, as the parent colony is often left queenless by all the young queens going out with a third swarm. In any event there can be no question but what a queen had hatched from the cell in which the dead worker was found.

IS SMOKE INJURIOUS TO BEES?

On page 483, I am asked "Whether the very pungent smoke from the use of sound wood in bee smokers has no deleterious effect on the delicate larvæ and eggs of the bees." I have smoked a patch of eggs and larvæ thoroughly, and marked the same by sticking wire nails around it, but have never found any of the brood removed by the bees, but all were sealed over and came out perfect bees; hence I conclude that smoke from any kind of wood is not deleterious to the bees or the brood.

CHILLED BROOD.

Not so with unsealed brood when it is exposed to a temperature which is below 55° to 60° F., for I have often marked patches of brood as above, from which the bees had withdrawn when the frames were handled in a low temperature, and I have invariably found that the bees removed all such brood as was exposed, even for a few moments at a time, outside of the hive. In the spring of the year, when the weather is generally cool, and the bees are few, considerable loss is likely to occur in this way, unless the operator is very careful. Especially is a cold wind liable to injure the brood, for the cold air is forced into the cells at such a time, while if the day was still, the few bees which were on the comb might protect it for a short space of time. In a still day, no harm will result, as long as the bees keep spread out evenly over the brood; but as soon as they begin to draw together, thus leaving apart of the brood exposed, you may know that you will lose much if you proceed with your operations. At such times it is best not to open the hives, but if such is necessary to be done, and the hive is full of frames of comb, I select such as has no brood in it, setting it outside of the hive. This will give room to manipulate the others easily, and by being as expeditious as possible, I rarely get any brood chilled, since I have found out how to guard against it. In early spring, brood is of much value, and he who can so work his bees here at the North, so as to get the greatest amount of brood during the month of May, will be the most certain of success.

Borodino, N. Y.

Rural New Yorker.

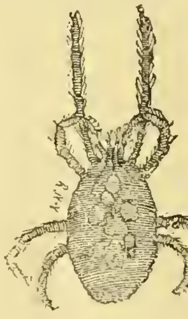
A New Bee Enemy.

PROF. A. J. COOK.

It has long been known to chicken fanciers that our poultry often suffer serious injury from a small mite. I have seen these little pests, red with the internal juices, so thickly clustered on boards, etc., in the poultry house, that to grasp the board meant death by crushing to thousands of these infinitesimal pests.

It has long been known that other mites attacked others of our domestic animals, like the cow, the horse, the sheep, etc. Other mites attack sugar, flour and cheese. The little red spider—also a mite—so thrives in a dry atmosphere that house plants are often destroyed by its blighting attacks. I have known the tidy housewife to be seriously annoyed by mites which had come from birds that had nested just above her window. The little vital specks fairly swarmed on the window panes. Other mites take up their abodes between the bases of the human fingers, while others still smaller inhabit the face pimples even of the graceful belle.

That insects are often preyed upon and destroyed by mites is a well known fact. Newport described a mite which he found on the larvæ of a wild bee; but that our honey bee is attacked and even destroyed by these little living particles is recent and most unwelcome news.



A New Bee Enemy—from life.

During the past spring a lady beekeeper of Connecticut discovered these mites in her hives while investigating to learn the cause of their rapid depletion. She had noticed that the colonies were greatly reduced in number of bees, and upon close observation she found that the diseased or failing colonies were covered with these mites. The strong and prosperous colonies were exempt from the annoyance. So small are these little pests that a score could take possession of a single bee, and not be near neighbors either. Mrs. S. feels certain that she found the same kind of mites on the church window where she resides. Upon request she sent me some of these latter which were lost in the mails. The lady states that the bees roll and scratch in their vain attempts to rid themselves of these annoying stick-tights, and finally, worried out, either fall to the bottom of the hive or go forth to die outside.

Mites are not true insects, but are the most degraded of spiders. The sub-class Arachnida are at once recognized by their eight legs. The order of mites (*Accarina*) which includes the wood tick, cattle tick, etc., and mites, are quickly told from the higher orders—true spiders and scorpions—by their rounded bodies, which appear like mere sacks, with little appearance of segmentation and their small, obscure heads. The mites alone of all the Arachnida, pass through a marked metamorphosis. Thus the young mite has only six legs, while the mature form has eight.

The bee-mite is very small, hardly more than five m. m. (1-50 of an inch) long. The female is slightly larger than the male, and somewhat transparent. The color is black, though the legs and more transparent areas of the females appear yellowish. As will be seen by the figure, which shows the form and structure very accurately, the anterior legs are the longest. All the legs are five-jointed, slightly hairy, and each tipped with two hooks or claws. Each of the mouth organs is tipped with a tuft of fine hairs.

The eggs which show through the body, as seen in the drawing, are mere specks of a red color, and from the fact that there are several sizes in the gavid females, indicating separate crops, it is probable that these females are not creatures of a day, but possess quite a longevity. The mites were sent me in a bottle, and when they arrived there were very numerous eggs and several of the young six-legged mites occupying the vial with the more mature forms.

REMEDIES.

The fact that what would be poison to the mite would probably be death to the bees, makes this question of remedy quite a difficult one. I can only suggest what Mrs. Squire has tried—frequent changing of the bees from one hive to another, after which the hive can be freed from the mites by scalding. The trouble with this cure is the rapid increase of these Liliputian pests, and the fact that many would adhere to the bees, and so be carried along with them, and so escape the hot-water bath. Of course, the more frequent the transfer, the more thorough the remedy.

IMPORTANT SUGGESTION.

I would suggest placing pieces of fresh meat, greased paper, etc., in the hives in hopes to attract the pests, which when massed on these decoys could easily be killed. If thought best, the traps could be screened by placing them in a box made of fine wire gauze so that the bees could not reach them. In such screens I should try placing paste-board smeared with a thin coat of thick syrup, to see if the mites had a sugar tooth to lure them to destruction. On such a sticky surface it would be well to sprinkle flour, sugar, etc. If we can find in this manner some substance that will attract these little destroyers, and call them off of the bees, the battle is won.

Lansing, Mich.

SELECTIONS FROM OUR LETTER BOX

The Michigan Convention.

DEAR MR. EDITOR:—May I ask you to call special attention to our next annual meeting to be held in Flint, Dec. 6 and 7, of the Michigan Bee-Keepers' Association. We expect to have by far the best meeting ever held in the State. It is expected that the Rev. L. L. Langstroth will be present. To see and hear him will pay any one for the trouble and expense incident to the journey. We also expect D. A. Jones, A. I. Root, C. F. Muth, and hope to have C. C. Miller and T. G. Newman. From what I hear, Michigan bee-keepers are to be out in force. Hotel rates are to be $1.00 a day. Further particulars as to programme, will be given soon. We expect to get reduced rates on the railroads. To aid in this, and that I may know how many certificates on railroads to ask for, will every one in this or other States who expect to come, drop me a card at once to that effect?

A. J. COOK, *President.*

Lansing, Mich., Oct. 15, 1883.

Foul Brood.

PROF. COOK, SIR: Hearing of the case of foul brood in Mr. Rider's apiary, at Howell, Mich., I gave an account of it at the Northern Michigan Bee-Keepers' Convention, recently held at Sheridan. Another man present gave an account of a case thought to be foul brood near Grunville, where the man had destroyed them. He also thought that there was a disease of the brood at a Mr. Lincoln's, near the same place. I being appointed one of a committee, I will try and tell you what I found. I went to Mr. Lincoln's accompanied by Hiram Rossman, a friend of H. Moon. We found a colony of bees in an old style of hive, badly diseased. Brood-rearing was in progress to quite an extent, but nearly all of the capped brood was dead, and in most all of them was a dark, ropy substance, and very offensive in smell. I will mail you a sample of the same. Mr. Rossman told me that in 1876, 17 years ago in the spring, that he and Mr. Moon, while transferring a colony from a box hive for a Mr. Taylor, that they came across what Mr. Moon said was a case of foul brood; there was a large amount of brood, and it was a mass of corruption, and the smell was bad. Mr. Rossman says the two cases are identical. Please send this with your answer to the BEE JOURNAL, and oblige many bee-keeping friends.

S. J. YOUNGMAN.

Cato, Mich., Oct. 13, 1883.

[The sample sent is plainly "foul brood." The characteristic odor, the concave cappings, the central puncture to the cap, and the decaying brood, which, when drawn out, is brown and stringy, all indicate but too plainly that the full destroyer is at hand.

The colony at Mr. Lincoln's should be burned at once, hive and all. Other colonies in the neighborhood should be examined, and if the disease shows itself, it will be most wise to burn all such colonies. It may be best in a large apiary to try to cure by the salicylic acid method, as explained in my book, or by the starvation plan; but with but a few afflicted colonies, a man owes it to himself, and surely to his neighbors, to burn at once. I have given such advice to several sufferers this summer, and all who have tried it seem to have succeeded well. This stamping-out process should be prompt, for let the "foul brood" once get into the trees in the woods (and what is to hinder), and it will be like Banquo's ghost, "it will not down."

Foul brood seems to have a wide range. Within a week I have received a sample of it from Louisiana, where it is creating sad havoc.—A. J. COOK.]

The Cure of Foul Brood.

How about foul brood, and who is bothered with it among their bees? If any there be that have thus been troubled, we suggest that a doctor be sent for at once. But not that doctor who had it in his own apiary for ten years, tusseling and testing in *his way* many remedies, and finally made a failure. (This happened in Cincinnati, Ohio.) How does this sound coming as it did from a bee-keeper who thus reported last fall at a North American Bee-Keepers' meeting?

[EDITOR BEE JOURNAL:—Above please find a slip from the *Grange Bulletin*, of Sept. 20, which please reproduce. It sounds so much like a slur that it requires a reply. You know I have never charged a cent for giving my experience to others.

We all know that the greatest ignorami are the most apt to exaggerate and to belittle others. There are such folks among bee-keepers, but I do not wish to put Mr. Hicks in that class; will rather take it for granted that he meant a good-natured joke, yet his joke needs a reply, and I will give it as follows:

I will put fifty dollars against his ten that he will not cure a colony of bees infected with the malignant foul brood unless he uses my remedy, giving him his own time for the work. He can select a place within 20 miles of Cincinnati with some reliable man; I furnish the infected colony. I don't think that I have a case of malignant foul brood in my apiary, but I know where to get it. Furthermore, I will put five dollars against one, that Mr. Hicks cannot prove ever to have seen a colony of bees infected with the malignant foul brood.—C. F. Muth.]

[In the above quotation from the *Grange Bulletin*, the question is asked, "How about foul brood? and who is bothered with it?" The Bee Journal would like to know who is bothered with it. Let those who are troubled with it speak out. We hear that there are several, and the fact that so many are inquiring, shows that there is danger about this dreadful disease spreading. Prof. Cook is right in saying that "the stamping-out process should be prompt." Its existence will be known, and no one can afford to cover up the facts, if they have it in any form. To sell diseased bees is nothing less than a *crime*, and is recognized as such by the laws of several States, notably in Michigan, we believe. Prompt remedies must be used, and we fear the *only sure remedy* is the entire destruction of the diseased colonies.—Ed.]

A Specialist's Report.

I hope any brother bee-keeper will not think that because no communication from me has appeared in the Bee Journal for nearly a year that I am one of the disheartened, who, after their enthusiasm has cooled, loose all interest, for I am not encouraged by the past season, but, quitting everything else, have thrown myself wholly on bee-keeping for a living. The season was not so good as it was a year ago, as the season did not last so long, but I closed it with 3,000 lbs., half extracted, and 100 colonies of bees. I need not report in detail, but close by wishing for all interested, as much good fortune as I have been favored with. Wm. Camm.

Murrayville, Ill., Oct. 16, 1883.

Tiering up—A Correction.

In the report of the North American Bee-Keepers' Convention, published in the Bee Journal, I am made to say that I champion the practice of putting empty sections *above* the full ones in tiering up, or at least to second Mr. Hall in it. What I did say, was that I put empty ones *under* the full ones. This I have practiced throughout the entire season. It is, I think, the common practice, and very advantageous. Toward the last part of the honey flow, however, if empty sections are still put under, the bees commence on them immediately, and the bee-keeper has the annoyance of a lot of partly-filled sections on hand. In many cases they are not needed at all, as the bees only gather enough honey to finish up the sections already on. I have been so much annoyed by this, that I had made up my mind that hereafter I would put empty sections under, until I thought likely that the flow would soon cease, then I put a tier of empty sections on top, where the bees would be rather slow to commence work, unless actually crowded for room. Mr. J. B. Hall, being just so much more wide awake than I, has been practicing on this plan, and so stated in the Convention, and I said that I intended to practice it in the future, especially after his recommendation. But I think no one present could easily have understood that either of us recommended the general practice of putting empty sections above full ones. By the way, I wish we could oftener see communications from Mr. Hall. I know it would be profitable. I shall not soon forget a very pleasant interview I had with him at Toronto, as he explained to me, in his jovial and gentlemanly manner, his various fixtures and plans. He very strongly impressed me as a master high up in our calling. C. C. Miller.

Marengo, Ill.

[Mr. Hall has also sent us a correction of this report by our reporter. But as the above covers the whole ground, perhaps it is not necessary to publish both now.—Ed.]

Lousewort Gerardia for Honey.

I send a small portion of the top of a plant I found while bee-hunting. It is new to me, as I never saw anything of the kind in this vicinity. I found it in a small clearing, on a high stoney ridge, that, until the past winter, had been covered with a heavy growth of oak timber. It was growing single and in small clumps from 6 to 18 inches high; and notwithstanding the severe drouth that has been raging for the past six weeks (and is still raging), its foliage and bloom was remarkably fresh and vigorous. I found no honey-bees on its blossoms, but mason, tailor and humble-bees very plentifully. Its blossoms emit a very agreeable fragrance, and if they yield nectar acceptable to the honey-bee, its abundant bloom, its season of bloom, and apparent perfect immunity from the effects of drouths, must constitute it a valuable late honey plant. Please give its name in the Bee Journal. Jas. F. Latham.

Cumberland, Me., Sept. 17, 1883.

[Prof. T. J. Burrill says: "This is *Gerarelia pedicularia*, or the Lousewort Gerardia. There are, in eastern North America, 10 species of Gerardia, all having quite showy flowers. Many attempts have been made to cultivate them, with failure in every instance, though the seeds readily germinated and the young plants apparently made a good start. Finally the secret was discovered in the fact that they are root parasites, securing more or less of their food substance from the roots of trees. The nectar is no doubt good enough, but from what has just now been said, this plant can hardly be depended upon as a honey producer."—Ed.]

Catching Issuing Swarms.

I am amused at Frank R. Roe's method of catching and hiving issuing swarms, as noted on page 287 of the Bee Journal. Just think of his running four miles in three-fourths of an hour, sweating like a running horse in fly time, over fences, through flax, oats, barley, corn, woods, logs and brush, and fording a river to get nothing but a well-heated system, say nothing about the value of his time, the torn clothes, and worn-out boot leather. Now, in this part of the county, we take a different course. If we desire to work to in the field we trust the children (whose time is of no great value) to attend the swarming; on the other hand, if we attend the swarming ourselves, we will have some other employment about our apiary, such as arranging our honey racks, sections, hives, or extracting etc., etc., and when our ear tells us that a swarm is issuing, we go and adjust a catcher, and then return to our work, leaving the issuing swarm to take care of itself. They soon cluster, and never heat as Mr. Roe's did, in his nail keg. We have perfect control, our bees do not get angry, and we put them in a hive when we get ready. J. W. Bailey.

Ripon, Wis., Oct. 15, 1883.

Sweet Clover.

Is sweet clover classed with noxious weeds in Illinois? Can it be sown in highways, with impunity to the sower? Alfred Mottay.

Ottawa, Ill., Oct. 15, 1883.

[It is not classed with noxious weeds, and can be sown anywhere with impunity that one may sow any other ordinary weed.—Ed.]

Bees Ready for the Cellar.

My 51 colonies of bees are now ready for the cellar at short notice, but I had to do considerable feeding to get them in good condition for winter. I commenced in the spring with 30 colonies, most of them in good condition; I took 1,350 pounds of comb honey and 100 pounds of extracted. There were 300 pounds of unfinished honey, which I fed back to the bees, and 125 pounds of granulated sugar, which left me 1,050 pounds of nice salable comb honey, and 100 pounds of extracted, which I sold in our home market at 15 cents per pound, and had plenty of orders for more. Last year I only had half as many bees, spring count, and got 900 pounds more honey and more increase. My best colony gave 85 pounds of surplus, this year, and no increase. Last year my best colony gave 235 pounds and one swarm. So we hardly had half a crop of honey here in northern Illinois. I use full sheets of comb foundation for increase, and good starters for surplus honey. H. T. Hartman.

Freeport, Ill., Oct. 15, 1883.

☞ The Northwestern Bee-Keepers' Society will meet in La Crosse, Wis., Friday, Nov. 16, in the City Hall.
E. Markle, *Pres.*

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

How to Create a Market for Honey.

We have now published another edition of the pamphlet on "Honey as Food and Medicine," with more *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy 5 cents, postpaid; per dozen, 40 cents; per hundred, $2.50. 500 will be sent postpaid for $10.00; or 1000 for $15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit. Try it, and you will be surprised.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a statement of account every week.

Trial Trip, until Dec. 31.—25 cents.

Wishing to be able to reach several thousands of the old-fashioned bee-men, and by the aid of the BEE JOURNAL to lift them up to higher ground, adopting newer methods and progressive ideas, we make the following very liberal offer: We will send the Weekly BEE JOURNAL till Dec. 31, *on trial, for* 25 *cents.* In order to pay for getting up Clubs, we will give a copy of Fisher's Grain Tables, or Scribner's Lumber and Log Book, to any one who will send us five trial subscriptions (with $1.25); for a club of *ten* we will give a cloth copy of Bees and Honey; for a club of 15, a cloth copy of the 7th edition of Cook's Manual of the Apiary; for a club of 25, we will present both the Manual and Bees and Honey. If any one wants these Books for nothing, here is an excellent opportunity to get them for a little exertion.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for ten cents.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey* at Fairs, will sell almost a fabulous quantity of it.

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1 year, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For **three** subscribers, with $6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For **four** subscribers, with $8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For **five** subscribers, with $10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

Books at Fairs.—Those who make an exhibit at Fairs will find that an assortment of Books and Pamphlets would sell and leave them a profit for handling. We will send such, postage prepaid, at 25 per cent. discount; or if the purchaser pays express charges, we will supply any of our own publications at 40 per cent. discount.

☞ The new two cent rate of postage for letters went into effect on October 1. Three cent postage stamps will now be but little used. For all fractions of a dollar sent to us hereafter we should prefer either *one-cent*, or else five or ten-cent postage stamps, or a Postal Note. Do not send coins in any letter.

Fairs.—To any one exhibiting at Fairs, we will send samples of the BEE JOURNAL and a colored Poster, to aid in getting up a club. The Premiums we offer will pay them for so doing. For a club of 8 subscribers to the Monthly BEE JOURNAL, or 4 Weekly, we will present Dzierzon's Rational Bee-Keeping, price $2.00.

Convention Notices.

☞ The Northern Michigan Bee-Keepers' Association will be held at Alma, Mich., the second Tuesday and Wednesday of October, 1884.
F. A. PALMER, *Sec.*
McBride, Mich.

☞ The fall meeting of the Northern Ohio Bee-Keepers' Association will be held in the City Council room at Norwalk, Ohio, on Thursday, Oct. 25, 1883, commencing at 10 a. m. A full attendance is requested.
S. F. NEWMAN, *Sec.*

☞ Please announce that the Iowa Central Association, will meet at Winterset, Iowa, Nov. 2, 1883.
Z. G. COOLEY, *Sec. pro tem.*

☞ The fall meeting of the New Jersey and Eastern Bee-Keepers' Association will be held in the city of New York, at the Cooper Union, on Wednesday, Nov. 7, 1883.
J. HASBROUCK, *Sec.*
Bound Brook, N. J.

☞ The Lorain County Bee-Keepers' Association will meet at Oberlin, Ohio, on the last Tuesday in October, 30th. O. J. TERRELL, *Sec.*

☞ The next regular meeting of the Mahoning Valley Bee-Keepers' Association will be held at Newton Falls, O., on the first Saturday of November, 1883. L. CARSON, *Pres.*
E. W. TURNER, *Sec.*

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

☞ Do not let your numbers of the BEE JOURNAL for 1883 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

☞ May we ask you, dear reader, to speak a good word for the BEE JOURNAL to neighbors who keep bees, and send on *at least one new* subscription with your own ? Our premium, "Bees and Honey," in cloth, for one *new* subscriber to the Weekly, or two for the Monthly, besides your own subscription to either edition, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

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Send for Price List to
D. B. BROWN, DES MOINES, IOWA.
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I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including THE CONQUEROR, and THE DOCTOR.

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Having a LARGE stock of SWEET CLOVER **SEED**, I can fill orders at **25c.** per pound **$3.25** per peck. or **$12** per bushel.

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The BRITISH BEE JOURNAL is NOW published SEMI-MONTHLY, at Seven Shillings, per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. **Rev. H. R. PEEL, Editor.**

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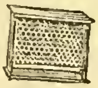

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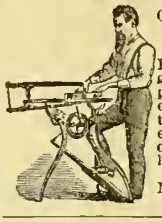
$72 A week made at home by the industrious. Best business now before the public. Capital not needed We will start you. Men, women, boys and girls wanted everywhere to work for us. Now is the time. You can work in spare time, or give your whole time to the business. No other business will pay you nearly as well. No one can fail to make enormous pay, by engaging at once. Costly outfit and terms free. Money made fast, easily and honorably. Address TRUE & Co., Augusta, Maine. 8A1y



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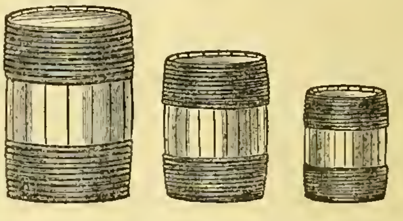
KEGS AND PAILS
FOR EXTRACTED HONEY.

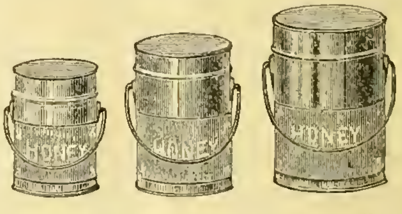
These KEGS are designed to answer the popular demand for honey in small packages, and when compared with large barrels holding from 300 to 500 lbs. each, they are fully as cheap and often cheaper. They need no waxing, but should simply be thoroughly scalded with boiling water before used. The leakage so often occurring in the large hard-wood barrels can be entirely prevented by using this size of packages. Considering the cost and trouble of waxing, the loss of honey by leakage, and the ease with which these Kegs can be handled and shipped, with an actual saving in original cost, it is apparent to all that they are the best. Prices:

5 gallon Kegs, holding a trifle over 50 lbs....40c
10 " " " " " 100 lbs....60c
18 " " " " " 190 lbs....80c

When 25 or more kegs are ordered at one time, a discount of 10 per cent. given on the above prices.



These new kegs are designed and manufactured with special reference to my experience and suggestions from those who have used the fish, lard and syrup kegs of last season. The staves are Norway Pine; the heads are Oak; and the hoops are Hickory, and, as will be noticed by the accompanying illustrations, they are well hound. If the heads are painted, I will guarantee these kegs not to leak. It is not essential to paint them, but I believe it will pay to do so.



These PAILS have a full cover and are excellent for selling honey in a home market, and after the honey is candied, they can be shipped anywhere. All sizes, except the smallest, have a bail or handle, and when emptied by the consumer will be found useful in every household.

Assorted samples of the four sizes put inside of one another as a nest, price. 50 cts. by express. The following are the prices in quantities:

				Per doz.	Per 100.
Gallon, holding	10	lbs. of honey	...	$1.80...	$12.00
Half Gal., "	5	"	" ...	1.50...	9.00
Quart, "	2½	"	" ...	1.20...	7.00
Pint, "	1¼	"	" ...	.75...	4.00

ALFRED H. NEWMAN,
923 West Madison Street, CHICAGO, ILL.

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Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XIX. CHICAGO, ILL., OCTOBER 31, 1883. No. 44.

THE AMERICAN
BEE JOURNAL
Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR,

Home Markets for Honey.—It is encouraging to know that our advice about making home markets has been so generally followed. In the Secretary's report of the Northern Michigan Convention, on page 543, this language occurs: "Much more honey has been sold in our home markets than in previous years; nearly every one had found ready sale for all that had been produced." Yes; and by working the markets up there will be no trouble in selling ten times the amount that is now being produced. Let the good work go on.

☞ Vice-President W. Z. Hutchinson reports the following arrangements: "The Michigan State Convention meets at the City Hall in Flint at 10 a. m., on Dec. 5, and continues in session two days. The President and Secretary may be found at the Dayton Hotel; excellent board can be obtained for $1.00 per day."

Suddenly Killed.—Mr. Henry Alley writes as follows: Mr. E. F. Cassell, of Illinois City, Ill., a prominent and enthusiastic bee-keeper, was killed Oct. 6, while attempting to board a moving train of cars. Mr. Cassell has been one of my best customers for the past 10 years, and I regret his sudden, sad, and untimely death.

☞ The feeder sent to our Museum by Mr. Alley, which we noticed on page 509, should have been called the "Locke Perfection Bee Feeder." Mr. Alley did not mention this at the time, and we innocently called it the "Alley's Feeder."

Drones from Worker Larvæ.—In the report of the Northern Michigan Convention, in this JOURNAL, on page 542, Messrs. Youngman and Trussell state that their bees have "reared drones and queens from worker eggs and larvæ." That queens can be reared, at will, from worker eggs and larvæ, is true, because both are females, but that drones, being males, may also be reared at the will of the bees, from worker eggs and larvæ, will be very generally disbelieved. Messrs. Youngman and Trussell should make further experiments, and report at the next meeting of the society, for, if we catch their meaning, their theory invalidates all the known facts in relation to the development of drones. But, perhaps, we do not get their idea, and hope to hear from them in the BEE JOURNAL concerning the matter. Careful investigation may reconcile it.

Surplus Honey Racks.—The Rev. A. Salisbury, of Camargo, Ill., sent one of his honey racks to be examined at the Convention, and then to be placed in our Museum—all of which has been done. He describes it as follows:

> As I cannot be present at the Northwestern Convention of Bee-Keepers, I send one of my honey racks and a set of sections, showing my method of storing comb honey, and the ease with which the bees have access to all parts of the honey chamber. My rack is only the top story of the hive. I am not apprised that any one uses the same rack in the same way, except bee-keepers here who have adopted it this season. If you think it will throw any light on progressive bee-keeping, please show it to the friends at the Convention, after which place it with your collections of improvements. A. SALISBURY.
>
> Camargo, Ill., Oct. 13, 1883.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

Hilton's Apiary.—Mr. Geo. E. Hilton, Fremont, Mich., has sent us a view of his apiary, intended to be exhibited at the late Convention, but it did not come till after it closed. It is placed in our office album. He describes it as follows:

> "As my business matters are assuming a shape that I shall not be able to consistently attend the Convention and see you all, as I should dearly love to, and had expected to, I mail you an 8x10 photograph of my home and the portion of my apiary that is not hidden by the house and trees. You will recognize me near the front row of hives; the person in the rear is a friend, and the parties in front of the dwelling, are my brother and his family, who are doing all they can to make home pleasant for me since the death of my dear wife, last May.

☞ Mr. Moses Bailey, Winterset, Iowa, writes thus of our book "Bees and Honey," after he had read it: "I have perused your book entitled 'Bees and Honey; or the Management of an apiary for pleasure and profit,' and I find it to be 'just splendid.' Thanks for sending it to me." A cloth bound copy will be presented to any one sending one *new* subscriber for the Weekly for 1884, or two *new* subscribers for the Monthly for 1884.

☞ Another Bee Paper is dead—the Illustrated *Bienen Zeitung*, published in German at Zurich, Switzerland. After struggling for 19 months for an existence, it succumed to the inevitable.

☞ Mr. J. S. Barb, Bristolville, O., sends us a plant for name. It is cleome—an excellent honey-producing plant.

☞ To all *new* subscribers for the Weekly BEE JOURNAL who send us $2.00 for 1884, we will send the remainder of this year *free*, from the time the subscription is received. So, the sooner they subscribe, the more numbers they will get *free*.

The Use of Honey as Food.

Dr. W. G. Phelps, in the *Practical Farmer*, gives the following on the use of honey, both as food and medicine:

In the minds of many persons there exists a prejudice against the ordinary use of honey as food. We hear it sometimes asserted that honey is an unwholesome sweet inducing colic, dyspepsia and various other disorders of the system. Such assertions are groundless. Honey in its purity is a God-given sweet, and, in its proper use, is conducive to health and strength. Indulged in immoderately, and only then at rare intervals, it may, like many other excellent articles of food, provoke an attack of colic or indigestion. Used however frequently and in connection with other food, it has a tendency to produce pure blood and give tone to the human system. Like all other sweets, it has also a tendency to fatten, and its use is said by medical writers to improve the beauty of the complexion. Sir John More, as early as 1707, was aware of the medicinal and beneficial effects of honey as a food, for he speaks as follows of it:

"The bee helpeth to cure all of your diseases, and is the best little friend a man has in the world. Honey is of subtle parts, and therefore doth pierce as oil, and easily passeth the parts of the body. It openeth obstructions and cleaneth the heart, and lights of those humors that fall from the head; it purgeth the foulness of the body, cureth phlegmatic matter and sharpeneth the stomach; it purgeth also those things that hurt the clearness of the eye, breedeth good blood, stirreth up the natural heat, and prolongeth life. It keepeth all things uncorrupt that are put into it, and is a sovereign medicant—both for outward and inward maladies, etc."

Experience with the use of honey in my own family, I believe, fully verifies Sir John's excellent opinion of this delicious substance. The question has been asked me by several of your readers: "Is not the comb taken into the stomach injurious?" I think I can safely answer, no! In other articles of food we often take into the stomach similar indigestible substances without injury, and often with benefit. Who, for instance, takes the trouble to seed every grape pulp eaten, or stone every cherry? These indigestible articles pass through the body without in the least injuring it. So with wax, as eaten in moderation, in comb honey. The uses to which honey can be put in cooking and in medicine, indicate it as of prime importance in the economy of life. Used instead of sugar for preserving raspberries and other fruits, I know of nothing its equal, as to many such compounds it imparts a peculiarly delicious flavor. For sore throats, ulcers of the mouth, and many other diseases honey forms a valuable remedy. To the rare individual for whom the temperate use of honey may produce functional disorders, I would say try heating honey before using it, and see if all such trouble is not remedied. Honey can really no longer be considered one of the mere luxuries of life. For the poor, it has become a cheap and wholesome substitute for the too frequently impure butter. Millions of pounds are to-day consumed by rich and poor alike, when 10 or 15 years since, but a few thousands were used. The severe stab which the manufacturer of the miserable glucose has received is due to a great extent to the production of extracted honey. This being the pure article, and produced, even at a profit, for 10 cents per pound, has virtually gained the mastery in competition with the above falsely so named "cheap sweet." Eat pure honey therefore, so that you may grow strong and handsome, fat and jolly, and—best of all—healthy and wise.

Honey Crop in Saginaw Co., Mich.

A correspondent in the Saginaw Co., Mich., *Evening News* of last Thursday, contains the following concerning the honey crop of that section, and as that is the home of Dr. L. C. Whiting, Heatherington & Wellington and Mr. James Ure, it will interest our readers to know how the "sweet work" progresses there:

I have made inquiries of bee-keepers, and made a careful estimate of the yield of honey in Saginaw County, and find that this year's product is but one-fourth of what it was last year. The season opened with promising prospect, bees increased rapidly in numbers and swarmed about the close of the white clover blossom. The new swarms have gathered no honey, and must be fed, or they will starve, during the winter. Some bee-keepers have already bought honey and sugar in equal parts and fed their bees for winter.

It has been a question with some whether it would be economy to shake the bees out of the combs and save what stores they have, or buy $3 worth of feed for each colony, to feed them, and run the risk of losing them after all, during the winter. All colonies are light in bees, whether they have stores or not, but this is especially the case with those with little or no honey. This is usually an unfavorable condition for a cold winter. The best that can now be done is to see that they have plenty of stores, and are packed so as to keep out the cold, or placed in a cellar that does not freeze.

☞ Mr. J. D. Enas writes that the name given in his communication on page 505 of the BEE JOURNAL for Oct. 10, as "Mr. M. Bragg," should be Mr. M. Bray. Of course it was an oversight of the printer.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

☞ We have received a copy of the Swine Breeders' Manual, or how to breed and manage improved swine, published by P. M. Springer, Springfield, Ill., at 25 cents. The Swine Breeders' Manual presents the subject in some of its details in a plain, brief way. Even those who have never kept any other than common hogs, may find in it much that will aid them to secure better results than are usually realized in the rearing of ordinary stock, and which may lead them to a trial for themselves of improved swine.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL, }
Monday, 10 a. m., Oct. 29, 1883. }

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—The demand for honey is extremely slow, and our commission houses are too well supplied to expect anything else. Prices rule low. Manufacturers complain of slow business. Extracted honey brings 7@9c. on arrival. I have bought for less. Comb honey in good order, 12@15.

BEESWAX—Good yellow beeswax brings 27@28 cts.; offerings few.

CHAS. F. MUTH.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 17@21c. Dark and second quality, 14@15c.; extracted white clover in kegs and barrels, 9@10c.; dark, 8c.

BEESWAX—Prime yellow, 27@29c.

H. K. & F. B. THURBER & Co.

CHICAGO.

HONEY—The demand for honey is good. Choice 1 lb. sections of white comb, well filled, brings 18@20c.; 1½ to 2 lb. sections, 16@18c. No demand for dark comb honey. Extracted honey is bringing 8@10c. per pound, according to body, color and flavor.

BEESWAX—Prime yellow, 33c.; medium, 28@30.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—There is a fair jobbing trade. Offerings are not large. Choice qualities command extreme figures. White to extra white comb, 16@20c.; dark to good, 10@13½c.; Extracted, choice to extra white, 8@9½c.; dark and candied, 6½@7¼c.

BEESWAX—Wholesale, 27@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Choice in better demand, but unchanged. Sales chiefly in a small way. We quote strained and extracted at 6½@7c. Comb at 12½@16c.; choice, in fancy packages, higher.

BEESWAX—Readily salable at 26@27 for choice.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY—Comes very slowly and sells as fast as it comes at 18@19c. for best white in 1 lb. sections, and 17@18c. for 2 lb. sections. Second quality is very slow. Extracted usually sells very slowly in our market.

BEESWAX—None in Market.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—We quote extracted honey at 10@11c., with a good demand. We have sold easily four times as much extracted as we ever did before.

BEESWAX—We have none to quote.

BLAKE & RIPLEY, 57 Chatham Street.

KANSAS CITY, MO.

HONEY—Market continues active, and everything in the way of comb honey is taken up on arrival at 17@18c. for choice 1 and 2 lb. sections. Extracted honey is in light demand, though some good sales were made last week at a concession, 8½@9¼c.; latter price for strictly choice honey in 5 gallon square tin cans with screw top, which is a desirable shape for this market.

JEROME TWICHELL, 536 Delaware Street.

CORRESPONDENCE.

For the American Bee Journal.

My Report for 1883.

G. M. DOOLITTLE.

By turning to page 248, of the present volume of the BEE JOURNAL, the reader will there find in what condition my bees were on May 2 of this year. About this time the weather began to warm up, and new flowers to produce pollen, so that brood soon began to be reared quite abundantly. About May 25, apple blossoms opened; but, as it rained the most of the time, little honey was obtained, so that most of the brood was reared from old honey still left in the hive. White clover bloomed very profusely, but as it was cold and wet all the while, the bees did not get a living, and, to keep them in good condition to gather honey when it came, I fed them from 200 to 300 pounds of old honey, which I had on hand. Whitewood, sumac and wild mustard came and went, but yielded no honey, and, although there was a merry hum in the locust trees while in bloom, when it did not rain, still scarcely enough honey was obtained to keep up brood-rearing, even while the trees were white with blossoms. It was rain, rain all the while, till every one longed for a few days of dry weather.

On July 16, the basswood blossoms opened, and, although, it still rained nearly every day, yet between the showers the bees worked as I never saw bees work before. While the blossoms to most other flowers are so formed as to catch the rain when it falls, and thus dilute the nectar in them, or wash it all away, the basswood blossom stands like an inverted dish, causing the rain drops to glide off without touching the nectar, thus allowing this flower to afford the bee an opportunity to secure the coveted sweet, even in a rainy time. To this peculiarity of the basswood flowers I owe most of my honey crop, for it rained nearly every day while the basswood was in bloom.

On July 23, it became cold, so that for three days scarcely a bee left the hives, and the bee yard was nearly as silent as in winter. About noon on the 27th, it warmed up enough so that the bees again went to work, and for the next week they labored assiduously when it did not rain. At this time the bloom was gone near the apiary, but on the hills, some six miles distant, it was still in its prime. As no long rainy spell had made a "gap" in the flowers, the bees followed up, as the flowers receded, till this distance was reached, while a long rain of three days would have allowed the bloom to have failed at a point two miles or so from home, for a mile or so in width, over which the bees would not have passed to find the flowers which were in bloom beyond. Thus fortunate, the bees still labored five or six days on the hill tops which helped them to finish up many sections which would otherwise have been left unfinished.

Many claim that bees do not work so far from home, or if they do, it is of little or no advantage, but I could see but little if any difference as to the gain made at this time, when compared with the week previous.

But, to return, with Aug. 13, the supply on the hills seemed to fail, and when I opened the hive on the 14th, I soon saw that the honey harvest was over, as robbers began to appear. For the sixth time, in succession, buckwheat failed to give any honey, and the season of 1883 passed without a single pound of surplus except from basswood.

By loss in wintering, as given on page 248, and sale of bees and early queens, my stock was reduced to 55 colonies, 40 of which were fairly good and the remaining 15 were from weak to very weak. I decided to work the 40 good ones for honey, and the 15 weak ones were to be devoted to queen-rearing. By footing up the result, I find that the 40 worked for honey, gave a surplus in comb honey of 2,388 pounds, and of extracted honey 1,922 pounds, making 4,310 pounds in all, or 107¾ pounds, as the average yield per colony, spring count.

My comb honey was sold at 16 cents per pound, delivered at our nearest railroad station to a buyer for the Boston market, and my extracted is selling readily at 10 cents. By adding the sales of bees and queens to the product of the honey, and deducting expenses, I find I have $1,021.30 left as the net proceeds from the bees.

As I have 80 colonies of bees at the time of the writing, in as good condition as were the 80 a year ago, this gives me a salary of $1,021.30 for caring for 80 colonies of bees one year, during which there was no honey yield, except from basswood.

I am frequently asked why I do not keep more bees, and why I do not attend conventions, etc. I wish here to reply to all, that I have a beloved father who is entirely helpless, from "creeping palsy," who depends upon me (an only son) to lift and care for him. So long as he lives my duty is plainly at home, which reason is sufficient excuse for a small number of bees kept, and a close confinement at home.

Borodino, N. Y.

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For the American Bee Journal.

Northern Michigan Convention.

The Northern Michigan Bee-Keepers' Association met at Sheridan, Mich., at 10 a. m. Called to order by the President, Geo. W. Stanton. The proceedings of the last meeting were read and approved. The roll of members was called, and a fair number found to be present. The meeting adjourned until 1 p. m.

At 1 p. m. the meeting was called to order by the President. The Secretary's and Treasurer's reports were read and approved. The enrollment of members was then made, which numbered 29.

The reports of the standing committees were then in order. The First Vice-President, F. A. Palmer, reported his success in bee-keeping as follows: In 1880, I bought 2 colonies, and, in May, I brought them home, and that season doubled them in number and took 135 pounds of honey, 35 of which was comb, and the balance extracted. I wintered them in Roop's winter hive, packed in sawdust, successfully. In 1881, I increased to 12 colonies, and took 775 pounds of honey, mostly extracted, which I sold for $99.27. I wintered again successfully as before, on the summer stands, and in 1882, I increased to 30 colonies, and took out one ton of honey, 100 pounds of which was comb, and the balance extracted. In the fall, owing to a pressure of official duties, I neglected to prepare my bees for winter, and lost all but one colony; I have increased to two, this summer, and shall buy more in the spring."

Our Fifth Vice-President, Miss F. A. Bellamy, of Ionia, makes the following report: "I received notice from our Secretary, as I was one of the officers, that I should make a report of my work this season. This is my third year in the apiary. I consider myself a novice. I have learned much, but I think I have very much more yet to learn. We began this spring with 13 colonies; now we have 40 strong colonies in good condition for winter, and have secured 2,450 pounds of honey, besides what our family have used on the table; that I have no account of. We have some neighbors that keep a few colonies, but with a few exceptions they are doing but very little with them. I have solicited their attendance at this meeting."

No other Vice-Presidents being present, we listened to the President's address, giving an account of his summer's work in the bee yard. Not meeting with the best success, he did not care to have it appear in print. He has 48 colonies, mostly strong; 8 or 10 may need help; his bees were not yet prepared for winter.

The following subjects were then discussed: "The cause and disposal of fertile workers;" and "The introduction of fertile queens to colonies that have just swarmed." Thirty-six bee-keepers were then present. The subject of "Foul Brood" was brought up, and enlisted a lively interest, as two or more cases were reported as existing in the county, having been brought here from Howell, Mich.; the facts of which were well known to Mr. S. J. Youngman, of Lake View, and W. W. Trussel, of Colby. A committee of three were appointed to investigate the same, and if it be found that foul brood existed in our county, to take the necessary steps to destroy the same. The President appointed the following members as a committee: S. J. Youngman, Lake View; W. W. Trussel, Colby; H. M. Roop, Carson City.

The subject of "Comb Foundation" was then taken up, and the different makes and qualities discussed; each giving their preference to some particular make, but the general impression was: that made on the Dunham machine by Dadant, was as good as any made. No one favored the use of old foundation carried over from the previous year, but would advise it being melted and made over. Some experiments made by Mrs. A. M. Sanders, during the past season, showed great advantage in favor of foundation made by Dadant & Son. Many thought much of the difference was owing to the material used as a lubricator in its manufacture; others in the manufacture of the wax; whether it be rendered with a wax extractor by the process of steam, or the old way of the wash boiler and rag process. Mr. W. O. Burk being present, who is engaged in the manufacture of foundation, says he has seen no wax that was burned that was gotten out with the wax extractor.

The subject of "Robber Bees" was discussed, as to the process of preventing and breaking up robbery. Many devices were given.

"The care of empty combs" was then taken up. No device was given that had been successful except by making a large box or cupboard, closely made, and by placing the combs therein and fumigating with sulphur.

"The process of rearing queens" was then taken up. Mrs. A. M. Sanders practices Doolittle's plan. Much favor was shown for the plan as given by Mr. J. H. Robertson, and the reading of this plan was called for, and the Secretary read the same, as given last year, from the minutes of the last convention.

S. J. Youngman gave us his plan of removing the queen and all unsealed brood, and after twelve hours he took a card of drone comb and cut it on a circle, then selecting the larvæ from a colony from which he wished to rear queens, taking a strip of the same and cutting off the cells one-half or two-thirds their length, and with wax or glue fasten it on the under edge of the comb, cut on a circle, and with a match or quill remove every other one of the young larvæ, leaving sufficient room to cut the queen-cells from the combs when ready to hatch, and placing them in a nuclei. In this way he has increased from 12 colonies to 60, the present season, and extracted 800 pounds of honey; 3 colonies went to the woods, and he has sold 12 queens.

"Drone brood, how disposed of," was then discussed, and it was unanimously approved that it should be well pruned out with a knife, leaving a reasonable amount in each hive, and in black or hybrid colonies their own brood should be all removed and other substituted from more desirable colonies.

"The different methods of feeding" was then discussed. No new way being devised, many of the old ways being satisfactory; but all agreed that fall feeding should be done early to prevent too late brood-rearing. If feeding must be done, let it be done as early as possible.

W. W. Trussell says he has had a colony that had no drone eggs or drones, and the queen was destroyed, and the bees reared drones and queens from worker eggs.

Mr. Youngman says he has had queens, drones and worker cells all from the same larvæ; they were all capped, but he does not know what hatched from them.

During the above session upwards of 60 persons were present. Adjourned to 7 p. m.

The evening session was called at 7 p. m., with all the officers present. The first subject taken up was the "Best method of increase." There was a diversity of opinion, but much favor was shown toward the plan given by Mr. Youngman, of starting early a nucleus with one or two frames of brood, and adding others as fast as the bees can care for them, by taking one or two frames from strong colonies when they could spare them, shaking the bees off at the old hive. Messrs. Wood, Benham and others favored artificial swarming.

A. L. Entricon had wintered drones and had queens fertilized very early, at a time when he thinks no other drones were in the yard; the queen was reared in the colony in which the drones were.

"The use of old combs; how long to be used." All admit that very old combs will produce smaller bees, but no one was able to tell whether those bees would ever attain full size after hatching. Mr. Youngman would not discard old combs, if perfect, for 10 or 15 years use.

Mr. Goodno approves of their use as long as perfect, as they are much better to ship bees in. No time could be agreed upon as to when to discard them.

The subject of "Bee pasturage" was then discussed. Much was said in favor of Alsike clover, the seed of which was furnished free by some of the members to their neighbors, who would sow it; also buckwheat in the same way, both of which could not be too highly spoken of. Other valuable bee plants were spoken of, which were of value besides for bees. Among them the English mustard and teasel.

The Secretary had placed upon exhibition seeds of the Rocky Mountain bee plant, borage, English mustard, sweet clover and figwort, which he freely distributed among the members. He was favorably impressed with the cultivation of all of them, placing them in waste places where now ragweed and dog-fennel occupy the ground. The cultivation of honey plants seems more necessary in older countries. The choice for a bee location is surely where it is just being cleared up, where raspberries, boneset, fireweed, asters, goldenrod, Spanish needle and the many wild flowers have not been subdued.

Adjourned until 9 a. m.

Wednesday, Oct. 10, at 9 a. m., the convention was called to order by President Geo. W. Stanton.

"The use of the telephone in the bee-yard" was discussed, and much valuable information was given by F. A. Palmer, of McBride's, who made the discovery as to its use two years ago, and communicated the facts to A. I. Root, who now sells the instruments.

Marketing honey was a topic of much interest, and showed that much more honey had been sold in our home markets than in previous years; nearly every one had found ready sale for all they had produced.

The ladies present gave details of the use they had made of honey in preserving fruits, especially blackberries, and much preferred it to sugar. Some of their neighbors having bought honey in preference to sugar, considering it cheaper. The greater part of the honey produced by those present being extracted, and the price varying from 10 cents to 14 cents at their doors, and when placed in the stores for sale, had been put in jelly cups, one pint, one quart, and two quart fruit jars; and where it was to be retailed, Mr. L. S. Benham, of Alma, had had calls for it put up in large sized jugs, letting it candy in the jugs, and when it reached its place of destination, it could be placed in a pan of hot water on the stove to liquefy, and make it convenient to retail.

Mr. Palmer preferred Japan pails holding 50 pounds.

Mr. Youngman was favorable to canvassing the county, and if necessary sell in small quantities, and afterwards make larger sales in consequence, and when they would not at first buy, leave a sample, and in that way make new customers.

The Secretary thinks, no doubt, that we would receive ample reward for the expense of buying the pamphlet on "Honey as Food and Medicine," in lots of 500 or 1,000, and distribute them fully, while canvassing, as Mr. Youngman suggests.

Mr. Benham said his experience was very unsatisfactory, in shipping honey in tin cans without coopering or crating.

The comb honey reported by members present had all been sold at from 15 to 25 cents per pound. A short distance showing a wide variation in prices in both extracted and comb honey, which is hoped will be regulated in a few years to that of a uniform price.

The subject of "Wintering" was the all-absorbing topic, and there was no one present but had something to say. All of the old plans and theories were revived, and verbal reports made of past experiences; many of which were sad, but still hopeful to secure the patent for wintering bees. Many favorable reports were given on experiments tried last year in burying them in trenches under ground. Others were inclined to try Mr. Dennison's plan, who places them in cellars, removing the bottom-board and setting the hives on scantlings so that dead bees can drop away from the bottom of the hives and frames. Mr. Dennison has been very successful in wintering in that way. The subject was thoroughly discussed, and no one could go away without gaining some new ideas, and all will be left to figure out its solution.

The officers for the ensuing year were elected as follows: President,

S. J. Youngman, of Lake View; Secretary and Treasurer, F. A. Palmer, of McBride's, 1st Vice-President, L. S. Benham, of Alma; 2d Vice-President, Edward Hunt, of Sheridan; 3d Vice-President, L. L. Bissell, of Lake View; 4th Vice-President, Mrs. A. M. Sanders, of Sheridan; 5th Vice-President, J. H. Robertson, of Pewamo.

The next annual convention will be held at Alma, Gratiot County, Mich., on the 2d Tuesday and Wednesday of October, 1884.

Adjourned until 1 p. m.

The Secretary suggested that a semi-annual convention be held, during the working season, at some beebeeper's apiary, accessible by all, that we may get practical ideas, and that the same be made a basket picnic, and all have a good time. The suggestion was approved, and the President, Secretary, Treasurer, and 1st Vice-President were made a committee to name the time and issue the call for the basket picnic convention. Miss F. A. Bellamy made the request that the gathering be held at her home near Ionia, which was cheerfully agreed to.

There being a little time before the trains were due, the subject of hives and frames was discussed, there being 722 colonies represented by members present, of which 539 were square or deep frames, and 183 Langstroth frames. It showed a preference for the square or deep frame. Mrs. A. M. Sanders could say nothing against the Langstroth frame, though she had both the shallow and the square frames, but considered the square frame the most convenient to handle. Bees wintered well, and possibly better in the shallow frame than in the square, last winter. Mr. Goodno's experience had been about the same; like all other discussions upon this subject, all did not agree.

There was placed upon exhibition at this convention an improved winter bee hive for the shallow frame, by Wm. O. Burk, of Crystal, which attracted much attention, and met with favor. He also had a simple though convenient device for fastening foundation in sections of his own make. The Secretary also placed upon the table the eighth edition of Prof. Cook's Manual, Thos. G. Newman's "Apiary Register" for 200 colonies, a supply of Weekly and Monthly BEE JOURNALS, and general catalogues of literature for the apiary, which was freely distributed. Others placed copies of A. I. Root's A B C of Bee-Culture, Quinby's New Bee-Keeping by L. C. Root, A. J. King's Text Book, and some fine comb honey by E. S. Collins, of Cedar Lake. This feature of the convention was interesting and instructive, but it is hoped a larger exhibit will be shown at our next convention.

The list of colonies with size of frames were as follows: L. L. Bissell, Lake View, 23 colonies in Langstroth frames; F. A. Palmer, McBride's, 2 colonies in 10x10 frames; S. J. Youngman, Lake View, 65 colonies in Langstroth frames; F. O. Johnson, Chadwich, 32 colonies in 9x10 frames; A.L. Entricon, Westville, 30 colonies in 10x12¾ frames; N. Kendall, McBride's 13 colonies in 10x10 frames; E. E. Thayer, 4 colonies in 10x12 frames; H. Peck, Saranac, 12 colonies in 11x11¼ frames; Geo. W. Stanton, Sheridan, 48 colonies in 10x12 frames; O. R. Goodno, Carson City, 46 colonies in 10x10 frames, and 16 colonies in Langstroth frames; Mrs. A. M. Sanders, Sheridan, 20 colonies in Langstroth frames, and 44 colonies in 10x12 frames; Mrs. Francis Miller, Sheridan, 6 colonies in 10x12 frames; Miss F. A. Bellamy, Iona, 40 colonies in Langstroth frames; Wm. O. Burk, Crystal, 3 colonies in Langstroth frames and 16 colonies in 10x10 frames; Mrs. A. Bradley, Sheridan, 7 colonies in 10x12 frames; W. M. Penny, Shilo, 39 colonies in 9½x10 frames; E. S. Collins, Cedar Lake, 12 colonies in 10x10 frames; O. F. Mason, Crystal, 12 colonies in 10x10 frames; J. W. Mitchell, Carson City, 3 colonies in 10x10 frames, and 16 colonies in Langstroth frames; W. W. Trussell, Colby, 33 colonies in 10x10 frames; V. Hallett, Colby, 12 colonies in 10x10 frames; M. Foster, Sheridan, 6 colonies in 10x10 frames; L. S. Benham, Alma, 81 colonies in 10x10 frames; Chas. Cross, Carson City, 63 colonies in 10x10 frames; D. A. McLean, Stanton, 6 colonies in 10-x10 frames; Mrs. G. L. Lean, Sheridan, 12 colonies in 10x12 frames.

Total, 539 in square or deep frames, and 183 in Langstroth frames.

A vote of thanks was tendered to Mr. Stone for the gratuitous use of his hall; also a vote of thanks to Geo W. Stanton, E. Hunt, Mrs. A. M. Sanders, E. E. Thayer, and others, for generous hospitality.

A vote of thanks was extended to the retiring Secretary for his service for the past six years, and for the interest he has always manifested in the welfare of the association. Adjourned. OPHIR R. GOODNO.
Retiring Sec.

For the American Bee Journal.

Labeling Packages of Honey.

W. Z. HUTCHINSON.

Of late quite a number have tried to out-do somebody else in getting up showy honey labels. Such enterprise is commendable, but *the* honey label has not yet been invented. I fear the inventors are working in the wrong direction. Take a clean, smooth, white section box, fill it with snowy-white tempting comb honey. There; does that need a fancy label? Will a showy label add to its beauty? Will it not rather detract? Is a beautiful woman more beautiful when over-dressed with gaudy attire? Does a rich, ripe strawberry need a strip of colored paper wrapped around it before it is fit for market? If not, then why desecrate the virgin purity of our white combs of honey by pasting around them gaudy labels? Ah, yes, says one, but these labels hide the propolis, mildewed sections, and unsightly holes left by the bees at the corners. Very true, but would it not be better to use smooth, white, well-seasoned sections, pursue such a method of management that the sections will be well filled, scrape off all propolis, and then the honey would be beautiful in its simplicity.

Hundreds of people, upon seeing my exhibit of comb honey at the State Fair, exclaimed: "That is the finest lot of honey that I ever saw!" That the honey was nice, is a fact, but there was an added attention of which, perhaps, no one thought, and that is, the honey was stored in smooth, white sections, crated in crates made from smooth, white lumber, and the reflection of the light from the smooth white surface of the surrounding wood, gave to the honey an added whiteness. There was an entire absence of labels, and, as the cases were piled up, tier upon tier, in the form of a pyramid, the exhibition was grand and beautiful in its simplicity.

Pure, white comb honey cannot be adorned, but if any producer desires to have consumers know whose honey they are eating, and hopes thereby to gain fame and sell much honey, let him use a small, neat, unobtrusive rubber stamp bearing his name and address, and stamp each section before putting it upon the hive.

How about extracted honey? Well, if it is put in glass, and kept in a liquid state, what is the first thing that a would-be purchaser does? He holds the package up to the light and exclaims: "Ah, how fine!" That is, he does if the package is not covered with a gaudy label, if so, how can he? A neat, attractive, but small label is the best for glass packages. When honey is put up in tin, there is some excuse for adornment by the way of labels, but even then I do not approve of highly colored, flaming labels; they give to the honey a tin-can, bar-soap, groceryfied appearance. Let the packers of fish, fruit, and vegetables adorn their wares with gaudy "chromos" if they please, but the product of the apiary requires nothing of the kind. It is beautiful in itself. "Beauty unadorned is most adorned."

Rogersville, Mich.

For the American Bee Journal.

Queen Cages, Introducing, etc.

G. W. DEMAREE.

While reading Mr. Doolittle's article on page 511, Weekly BEE JOURNAL, concerning "sending queens by mail," it occurred to me that those persons who have received queens from my apiary, through the mails, in the past season, and have read Mr. Doolittle's description of the cage used by him, will be puzzled to know which has stolen "tother's thunder," Mr. D. or myself. The cage described by Mr. D. is "point blank" the same in every substantial feature as the one I have used for sending queens by mail for more than a year past. In September, 1882, I sent a queen and her suite of bees to Rev. E. L. Briggs, of Iowa, and he returned the cage to me with a queen and her escort from his apiary without replenishing the food in the cage, as I understood it from him, and both queens and bees were found in the very best condition when reaching the end of their journeys.

I, at first, used a tin tube in the form of a miniature barrel, which was filled with the soft candy and inserted in the transverse hole in the cage, and the "bung hole" in the tin barrel was brought in line with the opening between the queen's apartment and the transverse food apartment. My idea for using the tin barrel was to prevent the soft wood block from absorbing the moisture of the candy, and to exclude the air as much as possible from the same.

After testing this method of provisioning the cage to my own satisfaction, finding it far superior to the old plan of boring one or two shallow holes in the top of the block, leaving the food exposed to the air, I conceived the idea of waxing the transverse hole and thus secure all the advantages of the tin tube without its extra expense and trouble.

I wax the food apartment of the cages by means of a "swab," which nearly fills the hole. This is dipped in hot wax and inserted into the hole and passed closely to every part, thus filling completely the pores of the wood. After the candy is passed into the hole, the latter is corked tightly with a common bottle cork, which is cut off, smooth with the block.

A few words about soft candy for provisioning queen cages will not be considered improper here. Doubtless some will remember that several years ago I experimented considerably with a candy made by mixing powdered sugar with a thin paste made of hot water and flour; my idea was that the paste would give adhesiveness to the mixture, and the "rawness" of the sugar would give the moisture. This candy proving to be seriously defective, though better than boiled candy, I commenced experimenting with candying honey. A good article of white clover, as thoroughly granulated as I could get it, was enclosed in a thin cloth bag and washed in cold water until most of the glucose substance was separated from the mass, after which the residue was tempered with granulated sugar until it was quite firm and stiff. I found this a success in every respect. I used this mixture before I ever heard of Mr. Good's mixture of unprepared honey and powdered sugar, and for long confinement, I believe it has no equal as a cage food to this day.

Why did I not give it to the public? Well, because I have "went off half cocked" so often in the past, that I have learned "great prudence," eh! But to return to the cage subject. I believe it an injury to a queen to startle her by pounding on the cage with the hammer, in the process of finishing it, after the queen is put into it. Bees are quite susceptible of being alarmed, and a "big scare" is doubtless very detrimental to them. On several occasions I have seen symptoms of dysentery in bees, that could be traced to no other cause than from the effects of a "big scare."

Therefore, I handle the cages which contain queens gently at the start, till the queen and her escort get over the first excitement consequent on their captivity. The cage should be entirely completed, ready for the mail bag, excepting the paper and twine, before the queen is hurried into it.

This is easily done by having a little side door to the cage through which the queen and bees will crawl very readily if the cage is held in such a position as to bring the entrance or door at the lowest part of the cage, and show the light above. The door can be closed by means of any simple device. But as I use this cage in preference to any other as an introducing cage, I employ for a shutter to the entrance, a little tin slide, which, when in an erect position, projects a half inch or more above the bottom of the cage when the wire cloth side is down; this tin slide is kept bent down flat with the bottom, so as to be out of the way excepting when the cage is employed to introduce the queen, in which case the tin projection is made to stand erect as first described.

To introduce a queen by means of this cage, the cage is placed, wire cloth down, on the frames in the usual way, so as to be between the quilt and tops of the frames; a small incision in the quilt permits the tin slide to "stick up" through the quilt, thus arranged the hive is closed.

The following day I open the hive, using care not to jar it, turn back the quilt until I can see what the bees are doing about the cage, if they are "balling" the cage. I close up the hive and let them vent their spleen on wood and wire until in a better mood. In this way I take a peep at them once or twice a day until I find the bees moving calmly about the cage just as others may be seen moving about the tops of the frames. When this condition of things is present, I close up the hive, feeling perfectly satisfied that all will go well.

Any time, after giving the bees a little time to become quiet, I open the hive with all the care possible, place my thumb on the cage to hold it firmly, and with the other hand draw out the slide and close up the hive.

After trying every feasible method which has been suggested by writers on the subject of introducing queens, I am glad to go back to the method above described, which I have tested thoroughly for three or four years past. It would be interesting reading were I to point out the serious defects in nine-tenths of the methods employed to introduce queens, but I have not the space to do it here.

Notwithstanding the severe drought which cut off nearly all our fall flowers, my bees got some honey from goldenrod, an unusual occurrence in my location, and but little from hydropiper, from whence our main fall supply generally comes. My bees are in surprisingly good condition for winter. Up to this writing, Oct. 20, we have had no frost to injure the tenderest plants, and bountiful rains during the last four weeks, has given us grass enough to winter all our farm animals if the winter should be an open one.

Christiansburg, Ky.

For the American Bee Journal.

Eight Frame Hive for Comb Honey.

GEORGE GRIMM.

I am slightly exercised at the idea that this controversy will eventually "impovish" me, and prove that which I have long accepted as a fact, to be but a "myth." Now, James, please don't! Remember how, two years ago, I listened so attentively to your eulogies on nature, etc, and how earnestly I helped you to destroy the last vestige of that chicken-pie we had for dinner! But if you must, well, then—but hold! I have got something to tell first: There is nothing in the whole AMERICAN BEE JOURNAL that interests me more than discussions on the wintering problem; and though I would not for the world come between the cross-fire of two such sharpshooters as Mr. Heddon and Dr. Tinker, yet I like to stand behind the fence and see the fun.

Yesterday I got out my old volumes of bee journals to see how much progress we have made in the last few years, and this is what I found in the *American Bee Gazette* under date of April 15, 1866: "How to winter bees best in a cold climate, is one of the questions that has never been decided and probably never will be, as different apiarians have different methods of wintering them; but a few principles can be laid down that all will admit to be correct, as follows:

1. To keep them in an even temperature, cool, but not cold enough to cause the dampness of hives to congeal to frost.
2. To keep them as quiet as possible, and if placed in a room or winter bee house, to be in complete darkness.
3. To afford them a free ventilation of pure air under all circumstances."

Will some one please answer how much more we have learned since then!

In searching through those old volumes, I found on a piece of old yellow paper, an article from my father's pen, which apparently has never been published, and as it bears somewhat upon this wintering question, and on the 8 and 10-frame Langstroth hive, I will copy it verbatim:

Jefferson, Wis., April, 1870.

"LANGSTROTH VS. SQUARE HIVES.—I use three kinds of movable comb hives in my apiary. One is the common one-story Langstroth hive, 10x14-x18 with 10 frames; the second is 10x-12x18 with 8 frames; the third is 11½-x13½x16 with 9 frames. I have used these hives for the last four years, but got up only hives of the second and third kind the last three seasons. I put my surplus honey boxes mostly directly on top of the frames, and let most of my hives swarm naturally. Now, for the result: From No. 1, swarms came averaging not as often as from No. 2 and No. 3, and I got, so far, but little surplus honey. The colonies in those hives, however, are usually very strong and heavy in the fall. From No. 2 (the 8-frame hive) I get more swarms than from No. 1, and nearly all my surplus honey. From No. 3 I get more swarms than from either of the two other kinds, but had not a single pound of surplus honey last season from 66 good colonies, and about 25 had not swarmed. The colonies in those hives are usually very strong and heavy in the fall. Bees in those three different kinds of hives winter well if wintered in the cellar, better than in common box hives, all of which had more or less moldy combs this spring. All things considered, I prefer hive No. 2, and so much am I convinced of its superiority, that I made 300 of them last winter, and am now making 360 more; while I make but 36 hives of No. 3 this season."

One line is here skipped, then comes the following without date, but apparently written soon after:

"From Nov. 9 to 12, last, fall, I stored away my 365 colonies of bees in my home apiary into the cellar and they remained there till the 26th of March, when I commenced taking them out. I finished on the 31st; only 3 of the 365 colonies had died, and they had been over-looked last summer, having been queenless ever since swarming. Of the 362, only 3 appeared to be queenless.

This is the best success I ever had in wintering bees. The bees in my outside apiaries are yet in their winter quarters. A. GRIMM.

Let me add, that if, as Mr. Heddon claims my father was very successful in wintering bees, and I have not a doubt on that point, then it is an established fact that he was successful *while using the 8-frame Langstroth hive;* because at the time when he kept the "large numbers of colonies" he had discarded nearly all other styles except the 8-frame Langstroth.

Jefferson, Wis., Oct. 12, 1883.

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For the American Bee Journal.

The Trial of the Small Sections.

DR. G. L. TINKER.

After much delay, I am able to make a report on the use of the small sections. We had so much cold and wet weather in June and July, followed by a severe drouth in August, that the amount of surplus honey is below the average in this locality. In considering the experiments here given, these facts should be taken into account.

The small section, 3¾x3¾x1⅜, was used on 14 colonies on an improved plan, the principle involved being, continuous passage ways and continuous combs. The plan proved to be a complete success, and might have been tested upon one hive as well as on the 14. I also found that the use of sections without separators could be made, with a little care in the management, entirely satisfactory. But the use of separators with a small section will be found unprofitable on account of the extra labor and expense involved.

When it was seen that the half-pound section without separators would be a success, one colony (a new swarm) was tried on the same plan with a section of larger size, 4⅜x4⅜x1½. Twelve of these were nicely capped over, and their weight found to average about 14 ounces, or not far from the average weight of the 4¼x4¼x2 section used with separators. The plan worked as well with this size as with the smaller. Other sizes larger were made, as samples, but they looked to be so much like a frame that the smaller size was adopted. With this size of section operated on my new surplus arrangement, it is believed that the utmost capacity of comb honey production by a colony of bees can be easily attained. But even with the smaller size of section, operated on the new plan, it is thought that considerably more honey can be obtained than by any other plan of section arrangement now in use, and with less labor and less trouble!

The tests were as follows: On seven hives the small section was tried with wood separators sawed exceedingly smooth out of white poplar. The bees entered the sections readily enough, but not to cluster and begin comb building for several days, and then the progress was slow. In each case the honey was principally stored in the body of the hive to the exclusion of brood, or the colony swarmed. That the separators were an obstruction was plainly evident. The largest yield was only 40 pounds, which amount was about 15 pounds above the average production of the 200 colonies in town. The average weight of the sections was 7 ounces.

On seven hives, the small sections were used without separators. Three were old colonies and four were swarms. Two of the former were good colonies, but no stronger than a dozen others. The other one was a nucleus last fall, and the sections were not put on until late. Neither of the three swarmed. One gave 72 pounds and 5 ounces, one 51 pounds and 2 ounces, and the nucleus nearly 25 pounds. The new swarms yielded from 10 to 15 pounds each. Foundation was only used for starters, averaging about one inch wide. The average weight of the sections was 8 ounces, and they were pronounced the handsomest sections that were ever sold in our market, commanding a ready sale at 25 cents per pound.

Four colonies were worked upon two pound sections, which were all nearly filled with clean white comb made last year. Each colony was worked to the best possible advantage on the old plan. Three were worked with section racks and one with section cases, side and top storing. The best colony gave 53 pounds and 10 ounces, one 44 pound and 6 ounces, one 36 pounds and 10 ounces, and the other swarmed.

Five colonies were worked on the old plan on one-pound sections (4¼x4¼x2). These, like the two-pound sections, were nearly filled with comb made last year. Four swarmed, and the other gave 46 pounds.

The largest other yield of comb honey was in an apiary near by, of 85 colonies on Simplicity frames. These had been strongly stimulated in the spring, while mine were fed only about 2 pounds of honey each. The best colony gave 60 pounds in two-pound sections, each being filled with Given foundation. But this colony contained one of Mr. Doolittle's fine queens, and my own apiary is mostly stocked with this strain of bees.

The average yield of the five best colonies in town, worked on the old plan, was only 48 pounds. The average yield of the two best, worked on the new plan, in the small sections, was 62 pounds, or about one-third more, while the advantages of nearly all new comb and full sections of foundation were against them.

I am aware that the tests were not on a grand scale, but were carefully conducted; and when it is said that one-third more comb honey can be produced on the new plan than by any of the old methods, I might be "mistaken" as our friend Heddon would say; yet the advantages, in a common sense view, are clearly on the side of continuous passage ways and continuous combs.

It was thought before-hand that the small sections without separators would be fastened all together with bulged and crooked combs, and when separated, would make a "mess." But there was not one comb out of several hundred that was fastened to the adjoining section, and not one but could be readily crated. The greater number were as fine and regular as if separators had been used. They were also plump and well-filled out, while many, where the separators were used, were only partly filled. On each hive, the bees went into the sections early and began work. There was no delay. The next day after the sections were put on, the bees were found clustered in them. The difference between separators and no separators was very marked. It was found that any of the sections coulp be readily taken from the racks and replaced. They were also very free from propolis, so that they could be rapidly handled and put into a crate for the market at once. I could take off 36 sections (the number used on each rack), shake off the bees and have them all in a crate within 10 minutes. Where the separators were used, it took not less than a half hour to get the sections off from one rack and nearly the same time to clean off the propolis.

My experience is, that separators are not only expensive and tedious to handle, but they are always a positive hinderance to the bees, in the large sections as well as the small ones, and that not nearly so much surplus can be obtained with them as without.

Mr. Bledsoe is certainly right when he says: "The bees are quicker to go to work in common frames with good starters of foundation; more bees can get to work, and the clusters being more continuous, they make more rapid progress." (See page 382 of the BEE JOURNAL). Now, this is the principle that I have brought into successful operation by the use of thin sections, continuous passage ways and no separators. On the hive that gave the largest surplus, the racks of sections were tiered up four high, and the result, practically, was nine combs, 27 inches high, by an average of 13 inches wide.

The queen did not trouble, in any of the hives, by going into the sections. There is, in fact, *no reason whatever* why bee-keepers should not abandon the use of the shallow chamber, so commonly provided above the brood frames. Without it, there is a certainty that bees will work to better advantage. Indeed, it seems plain enough that bees will yield more surplus where they can go straight up and down in continuous passage ways, than where they are obliged to turn at a right angle, on every trip into the sections, because of the shallow chamber, to say nothing about the 60 cubic inches of space that must be filled with bees to no purpose.

With the new surplus arrangement, no bits of wax are built any where to bother the bee-keeper, and very little propolis comparatively is used in the hive; probably because there are no places that need to be waxed up. After removing the surplus fixtures, which can be quickly done at any time without killing a bee or making the colony angry, the brood frames can then be lifted out at once. Thus, a hive having three or four racks of sections upon it, can be taken apart and put together again in a few minutes, with the least possible disturbance to the bees; and, in tiering up, the colony works right along as if nothing had happened.

Many of my double-walled hives have been made over, so as to accommodate the improved section rack; and it can be, doubtless, applied to most kinds of hives now in use by making a few changes.

New Philadelphia, O.

Utah Convention.

The Territorial Bee-Keepers' Association convened at the City Hall, on the 6th inst., at 7 o'clock p. m. President A. M. Musser called the meeting to order.

Mr. T. W. Lee, secretary of the Branch Bee Association of Toole city, reported 26 bee-keepers, 107 colonies of bees in the spring; increased to 228, and had taken 1,017 pounds of honey. At wholesale prices (15 cts.) this amounted to $1,052,55. Grantsville, same county, was, by order of last spring's convention, organized into a branch association by Mr. T. W. Lee, and reports 97 colonies of bees, and 2,672 pounds of honey, with 15 bee-keepers.

Mr. George Hilliard, bee inspector of Cache county, reports that in 1883 about one-half of their bees perished with the hard winter. Natural swarming had increased them to 160, and they are in a good, healthy condition. About 25 colonies had fled to the mountains, by reason of natural swarming. They have experienced one of their best seasons for honey this year.

Bishop Bills, of South Jordan, reports that he began this spring with 28 colonies, and increased to 43; had taken 5,500 pounds of extracted honey, sold for 15c. per lb., amounted to $825.

E. Stevenson has 50 colonies in good condition; has built a bee house and sheds with a view of an increase of 100 colonies, and 8,000 or 10,000 pounds of honey next year.

Parowan, Iron county, was organized recently by the last named gentleman, into a branch bee association, with Wm. Marsden as President, Wm. Holyoake, first Vice-President, Thos. Yardley, second Vice-President, and Bishop Stone and D. Dalley as Secretaries.

Vice-President Yardley began bee-keeping 3 years ago, with 3 colonies of bees, and now has 48, and has sold 24 colonies; last year he took 3,370 lbs. of honey, and 4,000 lbs. this year.

I send the above report of the Territorial Bee-Keepers' Convention, from the Salt Lake *Herald*.

Our bees have done nothing but stay in the hives; the past three weeks has been so stormy that the bees have been compelled to stay at home. You will see from the report that Tooele has done a little, but they could have done more, I might say double, for the cause, but the principal bee men are engaged in other pursuits, and are generally engaged just in the time that they should devote to the bees. I know it has been so with myself. We have now to prepare our bees for the winter. I hope that they will come out as good as they did this spring, and if honey will do it, I have plenty of it in the hives, although it has suffered during the past few weeks.

John Dunn.

Tooele City, Utah, Oct. 17, 1883.

For the American Bee Journal.

Bees Prepared for Winter.

L. J. DIEHL.

I now have my bees all prepared for the winter, 185 colonies, all in good condition. The season has been a prosperous one with me. I now have nearly two tons of fine honey on hand, in 1 and 2 lb. boxes. My bees are all healthy and strong. I have, as usual, prepared my bees to winter on the summer stands. The way I prepared them is given in previous numbers of the Bee Journal, but I will say this, that so much fuss and flurry about preparing bees for out-door wintering is, to my mind, all bosh. The essential points are these: Have just enough bees; and 25 or 30 lbs. of good honey; and keep them dry and quieted during the winter months. This is where the trouble commences. There are so many theories and different plans to accomplish the one important matter. Keep the bees dry. In my practice with bees, this is one of the easiest duties. I prepare my bees early in the season, say just after the honey harvest closes; by uniting small colonies, taking out honey from those that have too much, and giving to those that have not enough; put on quilts, etc., early in the season, and then the bees will properly cluster, before the damp weather sets in, in the fall. Since I have adopted this plan of protection and my method of packing, I have little or no loss in wintering. I look for considerable damp, rainy weather this winter, and I would caution all who wish to winter the bees successfully, to prepare the roofing so as to prevent dampness from excessive rain and snow, and if properly blanketed or packed inside the brood chamber, there will be but little loss of bees during this winter. I will report my success in the spring. I am not afraid, as to the results, for I have wintered at least 7 or 8 years in this way, with but small loss.

Butler, Ind., Oct. 25, 1883.

For the American Bee Journal.

A Little of my Experience

W. R. YOUNG.

I keep bees for pleasure and profit, and I discover that enthusiasm in apiculture is getting the better of me, consequently, I never expect, in this life, to be without beautiful bees, and the indispensable weekly edition of the American Bee Journal.

I purchased 3 colonies of natives in 1876; Italianized in 1879, by queens obtained of D. A. Pike, Smithsburg, Md., to whom we are indebted as the originator of the beautiful albino bee.

I wintered 18 colonies of Italians and albinos, and increased them, during the past season, to 30; I have about 680 pounds of surplus, in two-pound sections, and have a ready home market at 15 cents per pound. My standard of excellence for bees, is docility, industry, prolificness and beauty (golden bands).

When I hear a queen-breeder say, "I do not care for bands, but breed business bees," I decide immediately that I want none of that stock; they are hybrids, and the beautiful Italians are deteriorating in such hands. The absurd and inconsistent idea that the Italian bee, in all its purity, will not gather as much honey under the same circumstances as dark-colored bees (hybrids), is all bosh.

A good deal is said about the adulteration of honey, which is right and proper, but we should not lose sight of the fact, that the Italian bee has been adulterated with ugliness, ill-nature and crossness. With all the importations of different races, and the frequent crossings of the same with the pure Italian, nothing better has been produced. I am not quietly grinding my own axe, for I am not breeding queens for sale.

On the first of last June, one of my best Italian colonies swarmed; in due time a fine-looking young queen was hatched and laying. As the colony took kindly to the boxes, I did not disturb them until 21 days; when I examined, to see how she had mated, I was surprised to find no brood, but plenty of eggs, and my queen apparently all right. I examined weekly, and found the same condition of things. On Aug. 21, I destroyed her, as she was worthless. In all the bee literature at my command, I have not read of a like circumstance.

I build, for my own use, a side and top storing hive, and believe them to be the best for comb honey. I prefer a two-pound section box, and use a section rack with a strip of glass set in the side, consequently I need not disturb the bees to find out when the sections are ready to come off. I have tried both tin and wood for separators, and hereafter will use only tin. With wood, the bees build too many braces to the separator, and when it is removed, the capping is too frequently mutilated, and the sections made unsalable.

Myersville, Md., Oct. 22, 1883.

For the American Bee Journal.

Wintering Bees—Preparations.

ALLEN PRINGLE.

One of the readers of the BEE JOURNAL sends me the following questions for answer:

1. The cellar in which I must winter my bees is damp. How would you prepare them for their winter quarters?

2. Should the bees be confined on what combs will contain stores enough for winter, or should they occupy the whole hive, as in summer?

In preparing bees for winter quarters, whether for the cellar or other place, the preparations should begin early in September, or very soon after the honey fails. Those with insufficient stores for winter, should be fed either honey or good syrup from No. 1 granulated sugar—about one pound of pure soft water to two pounds of sugar, brought to a boil. This should be fed during warm weather, when the bees may be able to properly cap it over. The entrances ought now to be so diminished in size that only one bee can pass at a time, especially in colonies which are not surely strong.

Among the majority of our leading bee-keepers, the practice, I believe, prevails of uniting all weak colonies for winter. On this point I differ from them. I hardly ever unite for wintering. I simply crowd the weaker colonies up into small quarters in their hives, give them plenty of stores, keep them warm, and they generally come through just as well as the stronger colonies. Of course I admit it would be foolish to attempt to winter weak colonies outside, without thorough protection; but I cannot see the wisdom or economy of taking two weak colonies, each with a good queen, destroying one of the queens if you have no use for her, and uniting them to get them safely through the winter when you can get both safely through, queens and all, without uniting them, that is, if you have a proper place to put them in. From the small nucleus occupying but one or two frames up to the strong colony covering a dozen frames, all will winter about equally well under proper conditions. Other things being equal, it is better to have two good prolific queens in the spring than one. Of course, when such colonies are put out in the spring, the proper conditions of space in hive, temperature, etc., must be supplied; and I would by no means advise the inexperienced bee-keeper to engage in wintering weak colonies. But the skillful apiarist who understands his business can safely carry the weak colonies through, and I think such an one makes a mistake in uniting, unless he is short of queens, or wishes to weed out inferior ones, or has an unsuitable place to winter in.

After supplying all colonies with ample stores, or rather before doing so, if practicable, I go through the whole of them and diminish their quarters. I take out all light frames, and by the use of the division-board, crowd every colony up into close quarters, at the same time adding to the stores of the weak from such of the stronger ones as can spare. I cut a small hole about the size of a dime through the centre, or a little above the centre, of each frame to give the bees a free winter passage. This precaution is not so necessary when the bees are wintered in a uniform temperature of say 45° F.; but when they are wintered outside, or in a comparatively low temperature, it is absolutely indispensable, or the colony may starve with plenty of stores in the hive, the bees benumbed with the cold, not being able to get at the honey. If the division-board fits closely to the sides of the hive, with only a narrow passage at the bottom, a small hole should be put through the centre of it, so that, should the bottom passage become stopped, or nearly so, with dead bees, etc., the bees that manage to get through at the bottom may be able to get back.

Having thus given every colony sufficient stores for winter, crowded them up into the proper space in each hive, bored the division-board, removed the frames with superfluous pollen (for it is this, no doubt, which has much to do with the dysentery), and cut a passage way through the combs, the bees should be disturbed as little as possible during the last few weeks before they are put into winter quarters. Feeding them a little every evening to coax them into late breeding, will hardly constitute a "disturbance." At any rate they seem to relish that kind of disturbance. As to the proper time for putting them into the cellar, that must be governed by the weather and other circumstances.

And now, having prepared the bees for the cellar, doubtless the cellar itself needs a good deal of preparation. Mr. M., who sends the inquiries, says the cellar is damp. Most cellars unventilated are damp, except in hot, dry weather. If he means that his cellar is *wet*, he ought at once to set about draining it, if practicable. Then let him partition off the portion of the cellar the bees are to occupy, which should be the warmest portion, or that directly under the kitchen stove. Get a tinsmith to make a pipe some 5 or 6 inches in diameter, or the same size as the pipe of the kitchen stove. Let this pipe pass up from the bee department of the cellar, through the kitchen floor, immediately behind the stove, where it will be out of the way, and enter the stove pipe by means of a "T," just above the stove. There should be a damper in the cellar pipe just near where it enters the stove pipe, so that the draft may be turned on and off at pleasure. I have had this device in use some 10 or 12 years, and it is the very best method to secure thorough upward ventilation, I have ever seen. For the ingress of fresh air from without, the subterranean passage is undoubtedly the best, especially if the air is carried a sufficient distance to have it warmed during its passage through the underground pipe, which, of course, ought to be below the frost. Provision must, however, be made for the introduction of fresh air into the cellar in some way, whether by the under-ground pipe or otherwise.

In placing the colonies in their quarters, the lower tin ought to be at least 1½ or 2 feet from the ground or cellar floor, and the summer entrances should be left wide open. All top fixtures should be taken off until the frames are exposed. Then place a thin piece of cotton, large enough to completely cover the top of the hive, and hang over the edges over the frames, with some device under it and on top of the frames, to keep it up an inch or so, in order that the bees may pass freely under it. If the cellar is to be kept at a temperature of about 45° to 50°, this will be sufficient protection on top, for colonies of average strength. If the temperature is only 40° or under, each colony must have in addition to the covering mentioned, a sawdust quilt 3 or 4 inches thick. These quilts may be made of any thin porous material, and filled in with *dry pine* sawdust, or wool, if you can afford it. No matter what the temperature of the cellar may be, it is well to have these quilts on hand for weak colonies, which require more artificial heat, also for changes of weather, which may affect the temperature of the cellar, and for spring use outside.

Shelby, Ont.

Bees for Boys.—A farmer friend has 60 colonies of bees, a fine flock of light Brahma fowls, and a farm of 120 acres. He has two sons, aged 13 and 16 years respectively, and the elder boy has entire charge of the bees, of which he is very fond. He runs his sections, extracts the honey, introduces queens, divides his bees, and rears queens with a skill which many a veteran might envy. He is already well known in the city, three and a half miles distant, for his honey, and talks about bees, and quotes authorities in the most intelligent manner. All his honey is sold in one grocery store, and though he has had a good yield this season, and has reaped a fine profit, he cannot fully supply the demand at the store.—*American Agriculturist for November.*

☞ Articles for publication must be written on a separate piece of pape from items of business.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

MR. EDITOR.—Will you allow me to say to my friends that I can no longer keep up my private correspondence, and shall be forced to leave unanswered all communications except private letters relating to business, and questions regarding bee-culture to be answered through the question department or "What and How." These questions must be sent to the Editor, and NOT TO ME. This announcement is a necesssity; I am sorry it is such. JAMES HEDDON.

Honey for Winter use.

Will you please answer this in the BEE JOURNAL: Will it be well to put full frames of honey in the centre of hives before putting them away for winter? H. J. NORTHRUP.
Lansingburg, N. Y., Oct. 18, 1883.

ANSWER.—I have known of excellent success by so doing; put in combs as free from bee-bread as possible; give them a little more space between combs than used during summer.

Preventing Granulation.

Please answer in the Weekly BEE JOURNAL: What amount of tartaric acid is required to keep sugar syrup from granulating (also honey) and whether the acid has a tendency to cause dysentery? also, is the Pelham foundation as good as the natural base? SYLVESTER MARSHALL.
Pratts, Fork, O., Oct. 17, 1883.

ANSWER.—There is some difference in sugars, regarding their tendency to crystalize. I have never had any brand or grade that would crystalize if a lump of tartaric acid the size of a small hickory nut (say round and ⅝ diameter) was used for every 10 pounds of sugar. The amount of water used (that is, the thinness the syrup is to be when done) also makes a difference. That amount of acid is adapted to 5 pounds of water with 10 pounds of granulated or confectioners' A sugar. The granulated sugar has the greater tendency to crystalize, but is preferred here. Confectioners tell us that boiling tends to boil the grain out of the sugar. Syrup that shows a strong tendency to grain before passed through the bodies of the bees, shows no such tendency afterwards, which is caused by the addition of formic acid secreted and given to the syrup by the body of the bee, while she holds it in her sack. Regarding the acid causing dysentery, I know that it does not, and some of our most experienced apiarists have thought that it was a preventive. How that may be, I know not. Regarding the Pelham foundation, our experiments the past season (which will be reported soon) showed that the Pelham foundation is in no way objectionable on account of the shape of the base. It is a good foundation.

SELECTIONS FROM OUR LETTER BOX

Clouds and Sunshine.

I have gotten over my despondency of last April, when it seemed that my pets would all go under, but enough survived to give honey to revive my drooping spirits. I continued to read the BEE JOURNAL, and its timely hints has brought me through this season's work, and I am largely the gainer, I think, in the preparation for the next year's work. From 36 colonies, some quite weak, and several made no profit at all, I now have 85, an increase of 49; purchased 15 in box hives, and transferred them, making 100 colonies. I made 9 colonies, in partnership, in another apiary, so now I have 109 colonies in tolerably good condition. I expect to double some up, so as to have from 90 to 100, to put into winter quarters. I have taken a little over 2,000 pounds of honey, 1,400 pounds of extracted, and 600 and over of comb. I sold all the comb, and about 1,100 pounds of extracted at 12½ cents per pound, unless they took 100 pounds, then at 11 cents. I have a growing trade in honey. I shall purchase some white clover comb honey, to keep up my trade. I can retail to families in Louisville, readily. G. W. ASHBY.
Valley Station, Ky., Oct. 19, 1883.

My Report for Six Years.

This is my bee-keeping and honey report for 6 years. I have taken the BEE JOURNAL 4 years, and shall, as long as I keep bees. My bees are pure Italians, and my hives are the Simplicity with brood frames, to hold 8 sections. I winter on summer stands, packed in fours, in sawdust:

Col.in	Spring.	Fall.	Sold.	Died.	Comb.	Extrac.
1878	1	3		3		
1879	2	9				
1880	9	31	1		900	100
1881	30	54			1,800	700
1882	54	80	12		4,500	1,000
1883	68	100			4,000	1,400

L. D. ORMSBY.
Pierpont, Ohio, Oct. 24, 1883.

Well Done.

My bees did well this season. I obtained 75,000 pounds from 60 colonies, spring count. J. H. KENNEDY.
Little York, N. Y., Oct. 24, 1883.

Postage to Canada.

G. M. Doolittle, in the last column on page 511 of the BEE JOURNAL, says: "Samples of merchandise are mailed at 10 cents postage for every 8 ounces or less." I would like to know his authority. He says the Postal Guide says so. If it does, I cannot find it. On page 712, Official Postal Guide for 1883 (Sec. 511), it says: "Mailable matter of fourth class embraces 'samples of merchandise,' and postage thereon is one cent for each ounce," etc. If he has any later information I would like to know it. J. L. ANDERSON, P. M.
Lawrence, Ill., Oct. 23, 1883.

[Our correspondent is informed that Mr. Doolittle was speaking of the postage on queens *to Canada.*

The citation on page 712, is referring to samples of merchandise sent to any part of the United States—not to Canada! If he will turn to page 823 of the Postal Guide, volume for 1883, he will, under the heading of "Canada," in the department treating of *Foreign Mails*, see the following: "The weight of each package is limited to eight ounces, and the postage charge is 10 cents per package, prepayment compulsory."

This is unmistakably plain, and we note it here, so that there may be no excuse for any one attempting to send merchandise to Canada, of greater weight than eight ounces, except books, and the postage on each package is 10 cents; no matter if it weighs only one-half an ounce.—ED.]

Section Rack.

Would Mr. Turner be good enough to give a fuller description of the section rack used by him, than is given in his article on page 514 of the BEE JOURNAL. I do not see how glassing the last section of a row will enable one to judge as to the completion of the remainder, as the comb foundation in it would obstruct the view of the interior sections. I presume we shall hear from Mr. Heddon as to Mr. Turner's strictness in reference to the construction of the rack used by him. I am an anxious inquirer as to the best rack for adoption. J. C. THOM.
Streetsville, Ont., Oct. 13, 1883.

Honey Harvest.

This summer has not been a good one for bees, in this section of Iowa. Last year I received 450 pounds from 9 colonies, and increased to 14 colonies; and this year to 27 colonies, strict count. I got the enormous amount of 300 pounds. I extracted 250 pounds, and took off 50 pounds in one and two-pound sections. I like the BEE JOURNAL; could not get along without it. Its instructions are very valuable to me. I hope for a better summer for bees next year. S. J. MCKENNEY.
Burlington, Iowa, Oct. 16, 1883.

60,000

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

How to Create a Market for Honey.

We have now published another edition of the pamphlet on "Honey as Food and Medicine," with more *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy 5 cents, postpaid; per dozen, 40 cents; per hundred, $2.50. 500 will be sent postpaid for $10.00; or 1000 for $15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit. Try it, and you will be surprised.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a statement of account every week.

Trial Trip, until Dec. 31.—25 cents.

Wishing to be able to reach several thousands of the old-fashioned bee-men, and by the aid of the BEE JOURNAL to lift them up to higher ground, adopting newer methods and progressive ideas, we make the following very liberal offer: We will send the Weekly BEE JOURNAL till Dec. 31, *on trial, for 25 cents.* In order to pay for getting up Clubs, we will give a copy of Fisher's Grain Tables, or Scribner's Lumber and Log Book, to any one who will send us five trial subscriptions (with $1.25); for a club of *ten* we will give a cloth copy of Bees and Honey; for a club of 15, a cloth copy of the 7th edition of Cook's Manual of the Apiary; for a club of 25, we will present both the Manual and Bees and Honey. If any one wants these Books for nothing, here is on excellent opportunity to get them for a little exertion.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for ten cents.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey* at Fairs, will sell almost a fabulous quantity of it.

Our Premiums for Clubs.

Any one sending us a club of **two** subscribers for 1 year, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For **three** subscribers, with **$6**, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For **four** subscribers, with **$8**, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For **five** subscribers, with **$10**, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

Books at Fairs.—Those who make an exhibit at Fairs will find that an assortment of Books and Pamphlets would sell and leave them a profit for handling. We will send such, postage prepaid, at 25 per cent. discount; or if the purchaser pays express charges, we will supply any of our own publications at 40 per cent. discount.

☞ The new two cent rate of postage for letters went into effect on October 1. Three cent postage stamps will now be but little used. For all fractions of a dollar sent to us hereafter we should prefer either *one-cent*, or else five or ten-cent postage stamps, or a Postal Note. Do not send coins in any letter.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

Convention Notices.

☞ Please announce that the Iowa Central Association, will meet at Winterset, Iowa, Nov. 2, 1883.

Z. G. COOLEY, *Sec. pro tem.*

☞ The fall meeting of the New Jersey and Eastern Bee-Keepers' Association will be held in the city of New York, at the Cooper Union, on Wednesday, Nov. 7, 1883.

J. HASBROUCK, *Sec.*
Bound Brook, N. J.

☞ The Lorain County Bee-Keepers' Association will meet at Oberlin, Ohio, on the last Tuesday in October, 30th. O. J. TERRELL, *Sec.*

☞ Tne next regular meeting of the Mahoning Valley Bee-Keepers' Association will be held at Newton Falls, O., on the first Saturday of November, 1883. L. CARSON, *Pres.*
E. W. TURNER, *Sec.*

☞ The Northwestern Bee-Keepers' Society will meet in La Crosse, Wis., Friday, Nov. 16, in the City Hall.

E. MARKLE, *Pres.*

The Michigan Convention.

DEAR MR. EDITOR :—May I ask you to call special attention to our next annual meeting to be held in Flint, Dec. 6 and 7, of the Michigan Bee-Keepers' Association. We expect to have by far the best meeting ever held in the State. It is expected that the Rev. L. L. Langstroth will be present. To see and hear him will pay any one for the trouble and expense incident to the journey. We also expect D. A. Jones, A. I. Root, C. F. Muth, and hope to have C. C. Miller and T. G. Newman. From what I hear, Michigan bee-keepers are to be out in force. Hotel rates are to be $1.00 a day. Further particulars as to programme, will be given soon. We expect to get reduced rates on the railroads. To aid in this, and that I may know how many certificates on railroads to ask for, will every one in this or other States who expect to come, drop me a card at once to that effect ?

A. J. COOK, *President.*
Lansing, Mich., Oct. 15, 1883.

☞ May we ask you, dear reader, to speak a good word for the BEE JOURNAL to neighbors who keep bees, and send on *at least one new* subscription with your own ? Our premium, "Bees and Honey," in cloth, for one *new* subscriber to the Weekly, or two for the Monthly, besides your own subscription to either edition, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

Book Notices.

☞ COPP'S U. S. SALARY LIST AND CIVIL SERVICE RULES. Our many readers will welcome the solid information contained in the 160 pages of this recently-issued book. It is prepared by Henry N. Copp, a lawyer of Washington, D. C. All the Government salaries are given from President Arthur's $50,000 to Post-masters with $500, officials of the Treasury, Interior, War and Navy Departments, Custom Houses, Post-offices, and fully 20,000 Federal offices arranged by States and Territories. Specimen examination questions for admittance to the Civil Service throughout the country are added. The price of the book is only 35 cents. Politicians alone have heretofore held this knowledge. The people now have a chance to learn into whose pockets their money goes, and how the Nation's income is expended.

☞ The enterprising publishers of DR. FOOTE'S HEALTH MONTHLY have this fall, by the liberality of their premium offers, out-done all their previous generosity. The list to select from includes useful articles, standard books, and scientific literature, such as one usually expects to pay well for, but here they are thrown in with a year's subscription to the most popular and widely greeted HEALTH MONTHLY at only 50 cents a year. Try it before you buy it by sending for a free sample copy and illustrated premium list, to the Murray Hill Publishing Co., 129 E. 28th St., N. Y. City.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

☞ Do not let your numbers of the BEE JOURNAL for 1883 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

Advertisements.

A NEW HIVE

Arranged for continuous passage ways and continuous combs, so that greater ease and rapidity in the handling of sections is gained, also a larger production of comb honey. Although patented, a legal right to make and use will be accorded to any one purchasing a sample hive, the right only to manufacture to sell or convey to others being with-held. A stand, alighting board, entrance blocks, two division boards, ten brood frames, 32 1 lb. sections and the improved section fixtures, all packed in the hive. Price of first hive, including the above parts and a special circular on the mode of management, $7.00. A fine Photo sent for 8 two-cent stamps. Orders filled in turn.

Reference : Exchange Bank, New Philadelphia.

Address, **DR. G. L. TINKER,**
44Atf NEW PHILADELPHIA, O.

One Dollar per Copy.

The first and second editions of the HANDY BOOK comprised 2,000 copies. We have a few books left which we will mail to any address, if called for soon, for $1.00 per copy. The Book contains 216 pages—is printed in clear, large type on best paper, and is neatly bound in cloth. We have not put the book in the hands of dealers, as we chose to sell it to our customers with other goods, which we sell at prices very near the cost to manufacture them. To those who paid $1.25 for the book, we will, on receipt of 30c. in stamps, mail one of Locke's Perfection Bee-Feeders. Handy Book and Feeder, by mail, $1.50. Send the money at my risk. Do not pay 10c. to register it. Prospectus and special circulars describing three new and useful articles for the apiary, sent to any address. Make Postal Notes and Money Orders payable on Salem, Mass., P. O.

HENRY ALLEY,
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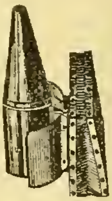

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I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including THE CONQUEROR, and THE DOCTOR.

Send for my 32-page Illustrated Catalogue of Bee-Keepers' Supplies of every description.

ALFRED H. NEWMAN,
923 W. Madison, CHICAGO, ILL.

Sweet Clover

AND OTHER SEEDS.

Having a LARGE stock of SWEET CLOVER SEED, I can fill orders at **25c.** per pound **$3.25** per peck, or **$12** per bushel.

Also, all other SEEDS for HONEY PLANTS,

ALFRED H. NEWMAN,
923 West Madison Street, Chicago, Ill.

THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is NOW published SEMI-MONTHLY, at Seven Shillings, per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. **Rev. H. R. PEEL, Editor.**

We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal*, both for $3.00 a year.

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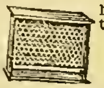

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Send for Samples & Reduced Price-List.
32ABtf **J. VANDERVORT, Lacyville, Pa.**

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XIX. CHICAGO, ILL., NOVEMBER 7, 1883. No. 45.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR,

Ripen the Honey.

We have just had a jar of honey brought to us to see if it was pure. The owner being fully satisfied that it had been "doctored" with glucose. We examined it and found that it had fermented, and the top of it was all a "ropy mass." A case of *sour* honey.

Another correspondent has sent us a sample, and asks us to analyze it, because he thinks it is adulterated. We are not a chemist, and cannot afford to hire these specimens analyzed "just for the fun of the thing." It would cost from $10 to $25 to do so, every time.

One of our exchanges very truthfully remarks that "the nectar gathered from the flowers cannot be called honey until the evaporation and ripening process has so far gone on that the bees have commenced capping it over. If it be extracted before it is capped by the bees, as some apiarists recommend, on account of the quantity being thereby greatly augmented, then it should be ripened before it is placed in tight packages or shipped, or it is liable to ferment and sour. The beebeepers of California find it necessary to extract the honey as fast as it is gathered, but they thoroughly ripen it after gathering."

Mr. Heddon uses crocks, piled over one another, with small sticks between them, allowing the air to pass freely over the honey, and to ripen it. These occupy but little space, and prevents the very disagreeable matter of honey souring, after it has been extracted.

It is the duty of the producer to see that his honey is ripened properly. No excuse is sufficient for neglecting this important matter.

The Effect of Frost on Foul Brood.

Prof. A. J. Cook says in the New York *Tribune*, that "experience has proved that it is impossible to destroy germs of foul brood by freezing. Obsarvation among the lower life forms, as well as research with organic tissues and liquids, prepares us for the answer. Many of the lower organisms, which are speedily destroyed by great heat, will simply remain functionally inactive when subjected to cold. Yet their vitality is simply held in abeyance, not destroyed, for upon the return of heat comes functional activity and all the phenomena which attend life. The same thing is noted in experiments with organic liquids. Gastric or pancreatic digestion will proceed as well in a test tube as in the stomach of intestines, if the requisite conditions of heat, digestive liquids, etc., are present. Subject the material to a boiling temperature, and digestion is not only stopped, but the digestive liquid is forever impotent. Cold, on the other hand, while it stops digestion does not impair the gastric or pancreatic juice. With the return of the proper heat, digestion at once begins again. Thus we see that protoplasm or organic cells will endure cold which only stays action, while heat utterly destroys."

☞ We have received the drawings of Dr. G. L. Tinker's new hive and comb honey arrangement. As it is designed for the sections to sit parallel with the brood frames, he secures continuous passage ways, and to the bees what appears to be continuous combs. This is, of course, secured by using *thin* sections without separators. These large-faced *thin* sections have been approved by honey dealers,and are more enticing to consumers.

☞ See how the subject of "producing pasturage for bees" progresses! From an agricultural exchange we clip the following advice: "If honey is the principal desideratum in planting, then harrow in sweet clover this fall, and as you will derive but little if any honey from it next season, in early spring harrow in some mammoth mignonette on the same soil, which will bloom in June, and astonish you with the excellence of its honey."

Nonsensical Stories.—Sensational stories about bees and honey are quite frequently seen in the papers. Somewhere in the rocks (says one) may be found "a large lake filled with honey!" In the South "they say" that bees will store no honey because they have discovered that there is no need of winter stores where Nature requires no winter! A lot of such foolish stories are being peddled around by the local papers. This reminds us of an item we saw some time ago in the *Farmers' Review*, of which the following is a paragraph:

> When anything sensational gets into the papers, how it does go! I presume that many readers of the *Farmers' Review* read the story about artificial eggs, but I doubt if any of them saw any of the eggs. Closely following the eggs story, was the highly flavored one of artificial comb honey—combs molded from paraffine, filled with scented glucose and the combs sealed over *with a hot iron!* We shall have artificial *strawberries* yet! Where, and how, such absurd stories originate, it is often impossible to say. About a year ago, an item in regard to managing bees by electricity, went the rounds, and now it goes around again.

☞ When in *earnest* is is quite surprising what a man can do. Dr. B. F. Hamilton, a well-known physician and surgeon of Henderson County, Illinois, has sent us 27 *new* subscribers. If all those who have a little leisure whould do as much in proportion to the busy Doctor, what a "boom" we should have! The Doctor has received as *premiums* quite a number of excellent bee books. Those who want to add to their libraries, will now be able to do it, for a few hours work in getting subscribers for the BEE JOURNAL. Who will try?

LATER.—Mr. D. G. Parker, one of the wide-awake bee men of Missouri, has sent us 39 *new* subscribers. They are rolling in at about a hundred a day. All those who are thus devoting a little time to the matter, have our thanks as well as the premiums. See a new List of Premiums on another page.

More Experiments.

The *Canadian Farmer* says more experiments are called for in connection with the pursuit of bee-keeping, and then remarks on the subject thus:

After all the numerous important improvements realized in bee culture, still the more advanced investigators seem disposed to proceed, under the impression of not having yet fully apprehended all the conditions and elements of attainable success. While the many experimental failures seem to almost suggest doubt as to the desirableness or prudence of proceeding in this direction, yet it may be asked, how else can we reasonably hope to attain to the knowledge essential toward placing our beloved bee-keeping as to result above a peradventure?

In fact, sometimes from even a grievous failure much may be gained in discovery of what may have been the mistake causing the disaster. We would be loth to admit that most of the worst cases of failure and "blasted hopes" might not have turned out under other conditions very differently.

Surely there are for instance certain laws and conditions of safety in wintering which, if only well enough known and possible to fulfil, we might with ample confidence count on the number to be brought through all right. Now facing winter, must we look wintering in the face.

However, it does look rather humiliating to admit that with all the skill and experience here employed hitherto, yet so many of us are earnestly asking one another (and feeling need to ask), "how are you deciding to winter?" Now this is just what we are driving at. We do well to more fully and freely than ever inform each other, and every time give the why and the wherefore. Whatever may be the seeming confusion and conflict of theories, still we are even so on the hopeful way in the search for the better. Thus as we cautiously proceed, keenly watch results, and candidly admit errors, may we all become wiser and more successful.

☞ Dr. Miller *will* feel flattered by the announcement in an agricultural paper that at the Chicago Convention he led off the discussion on "foul breeds," claiming that the most effectual remedy as well as the "most heroic, being total destruction." Oh! doctor, "how could you so cruel be?" This mixture of "foul breeds" and heroism is truly refreshing!! but it shows about the amount of intelligence possessed by the average agricultural writers when they "dabble in bee lore."

☞ The Northwestern Bee-Keepers' Society will meet in La Crosse, Wis., Friday, Nov. 16, in the City Hall.

E. MARKLE, *Pres.*

Oleomargarine Must Go.

The *National Farmer and Stockman* has this to say about that fraud oleomargarine:

The Georgia Legislature has taken the initiative in forcing oleomargarine out of the market. That body has passed a bill which requires all manufacturers of the vile stuff to plainly label their product; all dealers to notify customers when it is offered them; and all hotels, restaurants and other places of public entertainment, where it is used, to put the notice on their bills of fare and post the sign in their dining-rooms, "this house uses oleomargarine." We sincerely trust that all of the legislatures in the States of the Union will adopt such a measure as Georgia has, and if our readers in the various States will visit their members of the legislature and insist on them offering such a bill and their supporting it with their best efforts, it then will be brought into prominent notice, which will stir the legislatures to speedily pass it or some other law equally as effective in abolishing it from all markets in America.

Just so; the frauds must go! But let the acts of legislature also include that greater fraud—glucose. Let it strike a death-blow on all the adulterations of the age, and their name is legion. It is high time that the adulterators were driven to the wall.

The Michigan Convention.

DEAR MR. EDITOR:—May I ask you to call special attention to our next annual meeting to be held in Flint, Dec. 5 and 6, of the Michigan Bee-Keepers' Association. We expect to have by far the best meeting ever held in the State. It is expected that the Rev. L. L. Langstroth will be present. To see and hear him will pay any one for the trouble and expense incident to the journey. We also expect D. A. Jones, A. I. Root, C. F. Muth, and hope to have C. C. Miller and T. G. Newman. From what I hear, Michigan bee-keepers are to be out in force. Hotel rates are to be $1.00 a day. Further particulars as to programme, will be given soon. We expect to get reduced rates on the railroads. To aid in this, and that I may know how many certificates on railroads to ask for, will every one in this or other States who expect to come, drop me a card at once to that effect?

A. J. COOK, *President.*

Lansing, Mich., Oct. 15, 1883.

P. S.—I got the date of the above Convention wrong, in the notice of last week. The date should be Dec. 5 and 6. A. J. COOK.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., Nov. 5, 1883.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—The demand for honey is extremely slow, and our commission houses are too well supplied to expect anything else. Prices rule low. Manufacturers complain of slow business. Extracted honey brings 7@9c. on arrival. I have bought for less. Comb honey in good order, 12@15.

BEESWAX—Good yellow beeswax brings 27@28 cts.; offerings few.

CHAS. F. MUTH.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 17@21c. Dark and second quality, 14@15c.; extracted white clover in kegs and barrels, 9@10c.; dark, 8c.

BEESWAX—Prime yellow, 27@29c.

H. K. & F. B THURBER & CO.

CHICAGO.

HONEY—The demand for honey is good. Choice 1 lb. sections of white comb, well filled, brings 18@20c.; 1½ to 2 lb. sections, 16@18c. No demand for dark comb honey. Extracted honey is bringing 8@10c. per pound, according to body, color and flavor.

BEESWAX—Prime yellow, 33c.; medium, 28@30.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—Market is well stocked with ordinary qualities. Inquiry for the same is not active. For fancy comb it is an easy matter to secure custom. White to extra white comb, 16@18c.; dark to good, 12@14c.; extracted, choice to extra white, 7½@8½; dark and candied, 6½@7c.

BEESWAX—Wholesale, 27@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Choice in better demand, but unchanged. Sales chiefly in a small way. We quote strained and extracted at 6¼@7c. Comb at 14@16c.; choice, in fancy packages, higher.

BEESWAX—Readily salable at 26@27 for choice.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY—Choice honey is in excellent demand now. Every lot received thus far in good order, has been sold on arrival; best 1 lb. sections bringing 18c. quickly, occasionally 19c.; 2 lb., 17c, with an occasional sale at 18. Second quality and broken lots are very hard to sell. Extracted honey not in demand.

BEESWAX—28c.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—We quote extracted honey at 10@11c., with a good demand. We have sold easily four times as much extracted as we ever did before.

BEESWAX—We have none to quote.

BLAKE & RIPLEY, 57 Chatham Street.

KANSAS CITY, MO.

HONEY—No change to note since last week's report. All shipments seem to be taken up as fast as received at 16@18c. for comb, and 7@9c. for extracted in 5 gallon square tin cans.

JEROME TWICHELL, 536 Delaware Street.

☞ It would be a great convenience to us, if those sending us Postal Notes or Money Orders, would get the issuing Post-master to make them payable at the "Madison Street Station, Chicago, Ill.," instead of simply "Chicago." If they are drawn on Chicago, they go to the general office, and we have to make a trip of six miles to get them cashed; when if they are drawn on the Sation as above, it is only a few steps from our office. When sending us money, if you will please remember this, you will much oblige the publisher.

CORRESPONDENCE

For the American Bee Journal.

Humidity, Cold, Confinement and Pollen—their Relation to Wintering.

S. CORNEIL.

In replying to some of Mr. Heddon's observations on the above matters, I shall be as brief as possible.

On page 464 of the present volume of the BEE JOURNAL, Mr. Heddon states that bees have often been taken out of special repositories perfectly drenched with dampness, and the combs covered with blue mold, but with the bees perfectly healthy. I doubt the correctness of the latter part of the statement. I think Mr. S. F. Newman is right when he says, "If the hive becomes damp and the combs moldy the colony cannot be healthy." Mr. Heddon frequently refers to an occasion when Mr. Balch's bees were taken out as described above. The probability is that they were removed just in time to save them by giving them an opportunity to dry out, in dry air. Mr. Balch is represented as believing that moisture is good for bees and that ventilation is death. In the winter of 1880-1, owing to steady *cold* and consequent *confinement* they had no chance to get dried out all winter, and, in consequence, he had lost 149 out of 150. Mr. Heddon states that Mr. Balch's damp cellar, where the bees did not die, was colder than his own dry one where 45 out of 48 did die. Had he given us the accurate temperature and humidity of both cellars, the facts would have been of some value. As it is, he proves nothing.

He states that the dampest winters were the warmest ones. The records of the Signal Service show that the winters of 1874-5 and 1880-1 were both the coldest and dampest of any during the last decade. They were also the most disastrous to bee-keepers, in wintering. He says that "cold" and "confinement" as causes of dysentery have both fallen to the ground, and that when he has shaken up the "humidity" theory a little more, it will tumble with them. Will it, indeed? We shall see. "Humidity," "cold" and "confinement" as factors in wintering bees are based on facts in physical science, ascertained and established long before Mr. Heddon or myself appeared on the scene, and will remain unshaken long after we have passed away and are forgotten.

On page 391 of the BEE JOURNAL for 1882, Mr. Heddon correctly shows how the water produced by the assimilation of food taken in winter is eliminated by the bees, except that he attributes it all to transpiration, when in reality the greater part of it escapes by exhalation. This is the first fact, and I remark in passing, that just there Mr. Heddon was at the very verge of discovering the root of the whole matter. One step more and he had it. The step which he did not take is my second fact, viz: that in a saturated atmosphere of the same temperature as the bee, there can be no evaporation, consequently no excretion of moisture, either by transspiration or exhalation. This is where *humidity* comes in as a factor. A little bit of theory deduced from this fact and from what is known regarding other animals, is that since the bees cannot eliminate the water produced by the consumption of food, they will be in an abnormal condition, and we have Mr. Heddon as authority for saying that it is when bees are "out of normal condition" that they eat pollen to excess, (if they ever do so).

The third fact is, if the temperature of the colony be say 88, and the humidity 80, out of a possible 100, a sudden drop in the temperature of 7 degrees will cause saturation of the air and condensation of vapor in the hive, and the air will remain saturated at the new temperature as long as the conditions continue unaltered. This is where *cold* comes in as a factor.

Dr. Wetherill, of the Smithsonian Institution at Washington, says: "The rapidity of the evaporation of the body depends principally upon the low relative humidity of the air at a high temperature and upon the maintenance of this condition in the neighborhood of the body by the action of currents of air. In an atmosphere saturated with moisture the evaporation would be reduced to a minimum and would be practically nothing in such air having the same temperature as the body. Although we may bear with impunity these extremes for a short period, *a persistence in such conditions would be fraught with danger.*" In the same way bees may bear such conditions for a short time without apparent injury, but when they come to be confined for several months without a chance to get dried out, it is not surprising that they have to succumb. This is where *confinement* comes in as a factor.

When ventilation is imperfect there is undoubtedly another factor in the case, namely, carbonic acid gas, but owing to the difficulty in detecting it, ordinary observers cannot know much about its proportion in the air. A superabundance of it acts in about the same way, in preventing the escape of carbonic acid, as aqueous vapor does the escape of water from the body of the bee. Here is what Kuss, a German author, says on the matter: "If an animal be shut up in a confined space, and a sufficient quantity of oxygen be admitted while the carbonic acid produced by respiration is allowed to accumulate, the animal will die as soon as the proportion of this gas becomes too great. Not that carbonic acid is poisonous, only that the excess of this gas, or its too great pressure in the air, hinders the egress of that which is in the blood; the blood is then prevented from collecting the gas evolved from the combustion of the tissues, and the respiration of the latter becomes impeded." Want of oxygen also probably plays a part, but if we bear in mind that "the essential point of good ventilation is constant change of air," and make our arrangements accordingly, we need have no fears as to the supply of oxygen. The degree of humidity is taken by the most careful writers on ventilation to be a correct measure of the purity of the air of an apartment. This can readily be determined by the careful use of a hygrometer, which anyone of ordinary intelligence can soon learn to use with sufficient accuracy.

POLLEN.—One might reasonably expect that after discussing this question for nearly three years, its advocates would surely have shown beyond doubt that bees sick with dysentery have consumed excessive quantities of pollen. There is plenty of assertion but nothing approaching a proof of the fact. But suppose bees do at times eat unusually large quantities of pollen, the next enquiry is, why do they sometimes eat too much and at other times none or only enough for good health? Mr. Heddon's answer is that they eat it either because they do not like their liquid stores, or, on account of the pollen floating in the honey, consuming it is unavoidable; or else they are confined by cold till the honey within reach is consumed and they must eat it or starve. This theory will not cover the facts of ordinary observation, as I shall presently show. Then, too, it should be shown that excessive eating of pollen causes dysentery. If it were agreed on all hands that the "dry feces" theory is a mistake, and that bees discharge their feces only in a liquid state, it might be considered as giving a certain distance in that direction. But I think, notwithstanding Prof. Cook's investigation of the matter, there is a pretty general belief, amongst bee-keepers, that bees do void their feces in a dry state, when in perfect health, while in winter quarters.

In the following case, pollen as the primary cause of the loss is entirely out of the question, and yet it is only one out of hundreds of similar cases occuring all over the country every winter.

In the fall of 1879 I purchased 10 colonies, in box hives, from a Mr. Webster, residing some seven miles out of town. I brought them home in the latter part of October, and after sitting in my garden a few days, during which they flew, they were stored in my cellar with about twenty other colonies of my own. Mr. Webster had in all 42 colonies, and my 10 were about equal to the remaining 32. He advised me when placing them in the cellar to raise the hives an inch or so above the bottom board and to pull out one of the plugs of rags which stopped the holes in the top, stating that he had always done so and succeeded well. I had read a very interesting and instructive essay on "Insect Respiration and Bee Culture," in which everything seemed so plain and reasonable that when the writer said, before winding up, "our bees will need scarcely any air, and hence no ventilation, either upper or lower," I adopted that as my creed on ventilation of hives and held to it for several years. Another writer, too, advised that the heat of the bees be confined, consequently I set my box hives on the bottom boards in the cellar as they stood in the yard, without any ventilation, except a small three-cornered notch, for a flyhole, in the edge of the hive. Mr. Webster's cellar was an ordinary one for household purposes, but roomy and frost-proof. Mine should have been the better of the two because I had an exhaust pipe and a short sub-earth pipe for fresh air.

Now for the result: In the spring, 8 of my 10 colonies in box hives were dead, and the remaining 2 died before the 1st of June. The bees were a wet moldy mass; the combs daubed with discharges and dripping with wet, and the honey, of which there was plenty, thin and soured. My other 20 colonies in the same cellar covered with a quilt, and in hives having 2 sides of straw, wintered well, as my bees had done in the same cellar for several years before. Mr. Webster's 32 colonies came out every one in good condition. Now what was the cause of the difference in the results? It could hardly be in the honey, for even if colonies in the same yard do sometimes gather from different sources, it is extremely improbable that I should happen to get only those having bad honey, and that Mr. Webster should get all the others. For the same reason it will not be contended that I got all those having pollen in the middle of the hive or floating pollen in the honey. They were not selected on this basis, for the pollen theory had not then being "guessed," and the bees had as good access to their stores in the one case as in the other. The true explanation is that my bees were killed by their own breath, while Mr. Webster's, having similar conditions in every respect, except as to ventilation, kept dry and came out in good order.

In the "Bee-Keepers' Instructor" for April, 1882, Mr. Heddon says: "When I see a colony of bees that have nothing to eat but pure sweet cane syrup, of proper consistency, have the dysentery, I will of necessity change my mind, and honestly say so, publicly, at once." A few days ago I asked him to put a colony on combs of best cane sugar syrup without a grain of pollen and place it in a hive covered outside with pitch, bottom, sides and top, the joints to be made air-tight, the fly-hole to be reduced to half an inch by one quarter or three-eighths, and sealed after the bees had clustered; the hive to be placed in a cellar so that the bees could not get into dry air till next spring. If he follows those directions I think he will have a case of dysentery without pollen. I also asked him to supply several colonies with combs discarded from others on account of having too much pollen, but containing also plenty of honey. These hives were to have the entrance open full size and the back end of the frame exposed, leaving an opening across them as large as the entrance, the same as is done with such good success by Mr. Geo. Grimm. But for fear the old bees should die and stop the circulation, I asked him to bore two auger holes, one at each end of the frames, two-thirds of the way up. The hives were to be placed in a cellar having a steady temperature of from 44° to 50° and a relative humidity of from 55 to 75; and about the latter two conditions there was to be no guesswork, but accurate determination by proper instruments. If I were running an insurance company I would insure bees put up in that way to live for a premium of 5 per cent. and have a margin for profit.

Lindsay, Ont., Oct. 14th, 1883.

For the American Bee Journal.

Section-Storing Cases.

JAMES HEDDON.

Ere some of the less experienced be led, what seems to me, astray, I will comment upon Mr. Turner's article on page 514 of the current volume.

Since I have kept bees, I have made and tested as many as a dozen different devices for holding sections on the hives and to their sides, and generally made these tests upon quite an extensive scale.

I am well aware that no one system of surplusage embraces all the good points, but of all the most impractical and objectionable ones, two mentioned by Mr. Turner are the worst, viz.: "glassed" and "movable side" cases. Movable sides render a case not only more expensive, but impracticable and less durable. A movable-sided case was on exhibition at our late rousing Northwestern Convention. Of course there were no divisions in the case, such would not be adapted to the movable side. The dependence was upon clamping the sections, to prevent their falling through, and as long as there is any variation in the shrink and swell of wood, this method of supporting sections will ever be dangerous and impracticable, and used only by inexperienced bee-keepers. Such a case is weak, and incapable of enduring some of the most important manipulations.

"Glass" is one of the most objectionable materials that can be placed next to bees. They sorely neglect those combs that are next to glass. It may be true that the novice may learn more by looking through a glass at the outside of the outside comb of a range of 6 or 8 than he can by looking between the ranges of all the combs (both at their tops and bottoms) of a properly-constructed case, but the experienced producer will discover the condition of all the sections in a case in less than half the time consumed in peeking through glass at their sides, and with four times as great accuracy.

I can remove any one section up out of my case as quickly as any movable-sided case gentleman can do the same job. Admitting that any one of my sections require more time for removal than does his, after his side is removed, yet the fact that this removing and re-adjusting of said side requires time, it leaves the speed of the removal of any one section in favor of the solid case.

Now, as regards the total emptying of all the sections in a case, the "knock down" process will discount the movable-side plan. I can empty a case in less time than Mr. Turner can open and re-adjust the side of his case, I think. We can more than doubly discount the time required to take the same number from broad frames, and all who have ever seen the case manipulated here, agree that no system admits of the rapid and easy removal that we enjoy with the case.

Mr. Turner's statement that the sections should rest flat on the slats of the honey board, and flat on each other, is certainly laughable, and brought out a hearty laugh from three or four of our large honey producers who read it in the JOURNAL office at the time of the Northwestern Convention.

Certainly, Mr. Turner never had a large apiary to attend to. The idea of the practical and ready manipulation of tiers of sections, that set flat down upon each other, is something that I cannot conceive that any practical producer can entertain. Now, as regards any advantage of any such a bee-smashing arrangement, there is none whatever. Bees will not put as much glue upon the face of a section that is ⅜ from any other surface, as they will squirt in between two pieces that do not fit each other perfectly tight, which is the case with all sections that lie together.

Regarding these spaces interfering with the work in the surplus receptacles, we find they do nothing of the kind; nearly every year we have had a portion of our bees without honey boards, thus leaving off the thickness of the board and one bee space, and no one can detect any difference in our surplus success, between the two methods.

Mr. Turner's mention of shoving one section past another, thus "running the risk of breaking the capping," proves that he does not understand our system; that he does not know that we use ⅜ spaces between the tops and bottoms of our sections; that with our foundation and method of using the same, we get our combs nearly as straight as with separators; that when we push out our sections, we push them six at a time, which makes the entire row, leaving no chance for breaking the cappings, were the combs ever so crookedly built. I am willing to leave the matter now to the coming practice of honey producers; the same offer I made regarding the Dean case, two years ago.

Dowagiac, Mich., Oct. 25, 1883.

For the American Bee Journal.

Central Illinois Convention.

The Central Illinois Bee-Keepers' Association met at Bloomington, Ill., Oct. 10. President Wolcott in the Chair.

On motion of Mr. Vandervort, a report from each member is requested to be made, and returned by Dec. 10; blank reports to be sent by Secretary to members.

The first subject called for discussion, was "Wintering."

The President said that the most important matter is in the preparation of bees, in the fall, for winter. They should be let alone, and not disturbed. Sometimes he shoveled snow around the hives.

Mr. Vandervort wintered his bees on the summer stands with straw in the caps, holes in the honey boards, and the hives let down close to the bottom boards. He had one experience in wintering bees in the cellar. The hives and combs came out, in the spring, wet and moldy, and the bees in bad condition. He did not want any more cellar wintering.

Mr. Cox used cloth over two strips, placed across the frames, with chaff packing at the sides, and was successful.

Mr. Butler put about one-half of his bees in the cellar, and left the rest on the summer stands two years ago; and in the spring those from the cellar were moldy, and in very unsatisfactory condition. Those outside were in much better condition. Last winter he packed 27 colonies in chaff, on the summer stands, and they all came through nicely.

Geo. Poindexter was decidedly in favor of cellar wintering; he thought the two essential points to success were: "Put the bees in a frost-proof repository, and give plenty of upward ventilation to allow the dampness to escape from the bees." Last winter he lost 3 colonies out of 200 so wintered.

Mr. Cox found the moisture escaped much better with 4 inches of chaff, than twice that depth over the bees.

President Wolcott used 1½ inches of sifted coal ashes over the bees with satisfactory results.

It was asked which was preferable—passages over the frames or holes through the combs? The opinions differed according to each one's experience.

"On Marketing Honey," Jas. Poindexter thought that honey put up in two-pound packages could be produced at less figures, and suit regular honey consumers as well as smaller packages. Sections of two-pounds each, holding 1,000 pounds of honey, cost but little more than half as much as one-pound size to hold the same amount; less sizes required much more handling, both for the producer and retailer. That the cost of production in small and fancy packages would have the tendency to keep honey regarded as a luxury, while in larger and cheaper packages, it would tend to make it a staple article, and bring it into more general use.

Mr. Cox had trouble in disposing of honey in larger packages than one-pound.

Jas. Poindexter thought that depended on the way grocerymen were educated by bee-keepers.

Mr. Fell asked if honey in combs, placed on the top of the cloth, would be removed by the bees for winter use? Answered: If the weather is warm, they would.

"Do bees mark their location from the color, or the surroundings?" Mr. Jordon transferred bees from an unpainted box to a white hive. In shaking the bees in front of the new hive on the old stand, they were loth to enter, until a piece of the old hive was placed in front and against the new hive, when they entered readily, which he thought indicated they were attracted more by color than the hives on either side of the new one.

Jas. Poindexter said that a part of the hives that he had taken from the cellar in the spring were closed; after the other hives were placed out, and the entrance open, in a few minutes the bees, in considerable numbers, were noticed hovering around the closed hives, 25 feet away, which occupied the same relative position to the trees as the one fresh put out; some of these hives were of different colors. There were closed hives of the same color on either side, much nearer to the hive newly set out. He thought that bees marked the surroundings more than the color.

Mr. Funk noticed that swarms sometimes entered the wrong hive when returning, entering a hive similarly located to the one from which they issued; he was of the opinion that the relative position of the hive was marked more than the color; all his hives are painted white.

"Which is preferable for honey, black, hybrid or Italian bees?" Answered by Messrs. Funk and Keeran in favor of hybrids.

Adjourned to the second Wednesday in January, 1884, when the regular annual meeting of the association in Bloomington will be held.

JAS. POINDEXTER, *Sec.*

For the American Bee Journal.

Wintering—the Pollen Theory.

DR. G. L. TINKER.

Since Mr. Heddon has given us to understand that he has no "confidence" either in his twin theories or his little prophecy, there is little for me to say in reply to his last article. It is to be remembered, however, that Mr. H. is a man of undoubted liberal views—one who is ever ready to abandon anything that will not comport with the evident facts of nature; so we find him saying, almost mechanically, in "What and How:" "While it may prove true that pollen-eating may be the cause of dysentery, in every case it may turn out a fact that under most favorable conditions bees *can* consume bee-bread during confinement and yet remain healthy." The uprooting of cherished views finds expression only in a lingering doubt on the last proposition. This is encouraging. The pollen theory must go!

Mr. Heddon intimates that I believe the "bacteria theory" will account for some of the cases of dysentery. No; I have simply suggested it as a more plausible one than the pollen theory, and so applied it to the loss of the 48 colonies alluded to. A very reasonable hypothesis in the few isolated cases that now and then occur is to be found in the use of aphide honey. However, no one has been able to give positive evidence that any kind of nectar or sweet that the bees naturally collect, such as cider, the juices of various fruits, &c., may cause dysentery. Of the unnatural agents, it is well known that chemical glucose will kill bees if wintered upon it, probably by a poisonous action.

Thus, we have gone over the probable and improbable causes of bee-dysentery, and the preponderance of evidence rests with the humidity theory; or in other words, that dampness in the hive, conjoined with a low temperature, is the probable cause. This is no new statement of the theory, as Mr. H. would infer. It was assumed from the first that dampness and cold were co-operative causes; not by inducing an inflammatory state of the intestines, or even perhaps an irritation, but by causing an interference with the exhalations of the bees through the act of respiration, resulting in an accumulation of liquid in the intestines that under more favorable conditions would have escaped by the breath in the form of aqueous vapor.

The remaining question between Mr. Heddon and myself is in regard to the proper size of the brood and surplus department of the hive in winter. His experience that 8 Langstroth frames are safer to winter upon than 10, is no doubt correct. But I consider that to leave even 8 frames in the hive would be unsafe in a very hard winter. Better by far to reduce the number to 4 or 5. My choice of the standard L. hive in preference to a very narrow one was with this view; since, by placing a division board each side of the 4 or 5 frames, there is room left to put at least 3 inches of loose chaff on each side, and in the cap to place a large cushion. But with Mr. Heddon's hive there is not room for sufficient packing *close up* to the bees. This want of space Mr. H. would make up by a cumbrous outside case holding 6,000 cubic inches. Beyond question if a colony in an 8 frame hive were put in such a case it would be far less safe than in the standard L. hive, prepared as above, with no outside case at all.

I believe that with a long, shallow frame there is no real necessity for double casing of the hive at the ends of the frames; hence, my statement that so much "fixing" would not pay. No reference was made, or even thought of, to Mr. Heddon's hive in the production of comb honey. That would have been too great a diversion to appear under the heading of these articles.

As for out-of-door wintering in an 8 frame hive, doubtless Mr. Grimm would have no better success than Mr. Heddon has had. The latter, therefore, gets credit for making the best possible use of a hive unsuited to successful wintering on the summer stand. In an article on page 7 of the BEE JOURNAL, present volume, I stated that Mr. Heddon's method of wintering was "very doubtful" as compared with the others given, and, in a letter to Mr. Doolittle about the same time, predicted that he would meet with heavy loss if the winter continued at all severe. Yet our friend had just assured us that he could now winter bees as safely and surely as horses, cows and other farm stock could be wintered.

New Philadelphia, O.

Read at the Somerset County, Me., Association.

Swarming vs. Dividing for Comb Honey.

ISAAC HUTCHINS.

If we allow bees to swarm they will cast their first swarm at or about the commencement of the honey season, and in about twelve days we may expect the second swarm and in four days more the third—I think this is the average time of swarming; therefore it is sixteen days from the time the old queen leaves the hive with the first swarm until the third swarm issues. Then the young queen will commence to lay in about ten days more, making twenty-six days that no eggs have been deposited in the old hive and twenty-six days that no bees will hatch. Each of the three swarms have taken a large portion of the old field bees so that the old colony will be deficient in worker bees during all the time from the going forth of the first swarm until they raise them from the young queen, which will be at least fifty-five days. Fifty-five days being the extreme length of our honey season, excepting the fruit and fall flowers, the old colony will do well if it stores honey enough to carry it through the winter.

The first swarm commences housekeeping under more favorable conditions, nearly all of the worker bees are old enough to go into the field to gather honey, and they have a laying queen which will occupy the brood chamber, and they will readily go into the surplus boxes to store their honey; but as it will be nearly thirty-five days before the young worker bees will hatch and be old enough to take their places in the field, nearly one-half of the worker force will die before the young will take their place, so this colony will not do as well as it would if it had a few sheets of brood in all stages when they first commenced, so as to keep their numbers good all through the best part of the honey flow.

The second swarm issues about twelve days later, and the young queen will not commence laying until the second week. They will hatch no worker bees before the basswood honey harvest is over, and nearly two-thirds of the worker bees will die before the young bees come forth to take their place; and as more than one week will pass before the queen will occupy the brood combs, the bees will commence to store honey in them and they will not readily go into the boxes afterwards, and our experience is—usually no surplus honey from second swarms.

The third swarm will be very much smaller than the others, and unless we have an extra honey season it will have to be fed if we winter it. Therefore, if we allow our bees to swarm as they please, we shall get surplus honey from only the first swarm, and not so much from that as we should if we kept them strong in numbers all through the honey season.

How shall we prevent our bees from swarming and keep all our colonies strong to store surplus honey?

I answer by dividing in such a manner as to have each new colony as strong as possible and keep them from swarming, giving each a portion of the brood and a laying queen, being sure to give them room enough, and each division will be as good as the first swarm. Then they will have the advantage of having bees continually hatching, so there will be no dwindling during the honey harvest and we may expect better results from each division than from the first swarm, thereby giving us double the amount of surplus honey with only one-half of the increase.

Wellington, Me.

For the American Bee Journal.

Northwestern Bee-Keepers' Society.

A. R. KOHNKE.

The knowledge conveyed in the report of the meeting of this society is well worth a year's subscription to the BEE JOURNAL to any bee-keeper.

Speaking of races and strains of bees, there seems to be a preference for crosses, especially to overcome the aversion of the Italians to go into sections. I think there is a difference in this trait of character between colonies of pure Italians. Since such differences exist, may not this aversion be bred out and still preserve purity of race?

The prolificness of queen and the industry of colony do not necessarily go together. I have an Italian colony the queen of which is very prolific, having kept the hive and 48 sections full of bees ever since June 10th. The proceeds from that colony at the end of the season were 9 pounds of comb honey, and of extracted, about as much from unfinished sections; and on examination before putting them up for winter, I did not find more than 9 pounds of honey in the brood chamber. The bees look like what Mr. Heddon calls the "Golden Italians." The Germans have done better for me, (for comb honey).

The fact that bees try to supersede not only old queens but very prolific ones also, has led some bee-keepers in Germany to suppose that extraordinary prolificness may be a reason for bees to supersede the queen.

Bee-keepers should try to profit by Mr. Burnett's experience in regard to the size of sections. Sections in which the sealed comb is or cannot be much thicker than sealed comb in the brood chamber, would perhaps be more readily taken to by the Italians, while those two inches wide may seem to them out of all proportion in comparison to their lower apartment.

"Jane, take this honey down cellar," said a lady to her servant girl, after I had sold her a crate of nice clover honey. Of course, I stopped them right there, giving some sound advice as to where to keep that honey.

DYSENTERY.—If Mr. Heddon had omitted one word in his reply to the Rev. L. L. Langstroth when he says: "but they are sometimes compelled to eat it," (pollen,) he would have given the sole and only reason for bees dying with it. Drop the word "sometimes" and you have the whole thing in a nutshell. Whenever a large amount of pollen is covered with honey or sugar syrup, bees clustering on that will get the dysentery, if they cannot readily leave that, when they get to the pollen, "which is at the bottom," as Mr. Oatman expresses himself; but I think this latter gentleman is mistaken if he thinks covering pollen with honey or sugar syrup will prevent the malady. Bees will not cluster on dry pollen because they cannot live on it, but should it be covered, they will. Result, dysentery; unless mild weather permits them to move.

As to the new bee enemy, described by Prof. Cook, I would suggest treating the affected colony to a good dose of tobacco smoke—not enough to stupefy, and after ten minutes or so, transfer them to a clean hive and scald the one they were in. It may be necessary to repeat the treatment after a week or ten days.

Youngstown, Ohio, Oct. 30, 1883.

For the American Bee Journal.

Equalization of Colonies of Bees.

J. E. POND, JR.

I presume that every intelligent bee-keeper that gives his own time to the care of his apiary, has noticed that of a dozen colonies, all apparently in like good condition, 1 or 2 will give exceedingly good results comparatively, while the balance will hardly come up to mediocrity in the amount of surplus obtained from them; and I myself have noticed one thing further, (which I presume is not exceptional,) that, of a dozen colonies, the 1 or 2 that gave the best results last year, would be this year among the majority from which a poor yield is gained. This has been my experience for years. At first I concluded it must be owing to superior strains in the superior colonies, and endeavored to remedy it by making such changes as would—theoretically, at least—equalize the matter, but when, the next season, I found the best colony of the previous year showing a decidedly poor state of affairs, I concluded that something besides poor stock was the cause of the trouble. My aim in my own apiary is, not to raise 1 or 2 colonies which would store an exceptional amount of surplus, but to put my whole apiary into a condition such that each colony would give a fair amount of gain, and the average would be nearly equal in each colony also. This I have found it impossible as yet to do; no matter how careful I am in choosing queens, or how much attention I pay to equalizing the condition of my stock, the result in the fall inevitably is that 1 or 2 have far exceeded the others in the amount of honey gathered. I have studied the matter to some considerable extent, but have not as yet fully solved the problem of why this is so; still I have formed an opinion in regard to the matter and will venture to give it, hoping that it may not be looked upon as the chimera of a visionary, or the vagary of a disordered intellect, but instead will create enough interest in the matter to start an amicable discussion in regard to it.

My idea is that each colony chooses a foraging ground, which may vary from year to year, and consequently the amount of stores gathered will vary also, depending upon the amount of honey-producing flowers growing thereon. It is supposed that a radius of three miles from an apiary comprises the ground usually covered by its bees. I conclude that while all this territory may be, and probably is, covered by a large apiary, the individual colonies that compose such apiary have their own favorite localities, which may change somewhat, but which will be visited so long as any amount (no matter how small,) of honey is found; and that this locality is not abandoned so long as any honey can be gathered therefrom.

If my reasoning is not correct, it certainly is possibly so, and until someone gives better, I shall stick to my opinion. The remedy, if any there is, and I admit that a remedy is almost impracticable, is to plant honey-producing flowers in every direction from an apiary, as a means of aiding nature to counteract her own sterility. With a small apiary it will make little difference, but with a large one it will, I think, make enough to be fairly appreciable. At any rate some good will result from efforts made in this direction, the difficulty being to perform the labor in a manner such as will bring about the best results. Who will give the subject some attention, and the readers of the BEE JOURNAL their views upon it?

SHALL WE HYBRIDIZE OUR BEES?

Mr. Heddon claims to have made such progress in crossing his bees as to have obtained a new strain, with characteristics so fixed that they are invariably reproduced, and that from the strain so obtained, to gain the best results. Hybrids have always been considered valuable as honey gatherers, their exceeding ferociousness being the principle objection brought against them. I myself have made some attempts in this direction, but I admit I have most signally failed, and that too where my own bees are the only ones within probable flight-range of any apiary; some five miles being the nearest distance at which any bees are kept. I have crossed the black drone with an Italian queen and "*vice versa*," but have never been able to fix any qualities save crossness. Stripes of all kinds, from 3 to none, and of all shades of color have been found, but nothing have I been able to produce in the matter of equalizing either color or number of bands. I am a lover of beauty in everything, but do not carry it in my apiary to the extent of sacrificing other qualities to the maintenance of beauty alone.

I have had Italians for 17 years, and more, and have found them far superior to the blacks, and as a rule, far superior to any hybrids. I have occasionally found a hybrid queen whose workers were the best of workers, but have not been able to fix those qualities so desirable to retain, but have been able to do so to my satisfaction with the Italians. I do not say it is impossible so to do, but it does seem difficult to create a new strain (using the term strain for all it implies,) from hybrids (the Italians are now admitted, I believe to be hybrids, using the term hybrid to mean a cross,) when it has taken so many years to make *them* what they are.

I have no doubt Mr. Heddon has produced excellent bees, but will they stand the test, as do the Italians, of being kept alone for a term of years? That question as yet remains to be answered, and my advice to beginners (the old ones can take care of themselves,) is to go slow in the matter of running after new things. The Italians have been fully tested, and stand the test too; their record is made, and it is a good one; so I say be careful in selection; take nothing upon credit in making a start, and as you become older in the business and gain in experience, you will be better able to judge of the value of making experiments in new fields and with untried instruments. I do not wish to be understood as detracting from the value of Mr. Heddon's new strain, far from it; he is a bee-keeper of experience and honesty, but I do wish to deter any beginner from leaving the old beaten track until he fully knows the new paths and can safely follow them.

Foxboro, Mass., Oct. 26, 1883.

Read at the Maine Convention.

Mortality of Bees—Winter & Spring.

WM. McLAUGHLIN, M. D.

Adversity and losses often teach us more important lessons and produce greater range of thought than prosperity and gain. So the usual mortality of bees during the winter and spring may be an incentive for us to make further investigations, learn more important facts, and yet discover some means to avert or prevent this fearful drawback on bee-keeping in our State. And when we consider what enormous losses have been sustained, year after year, it behooves every one who has any interest in the success of apiculture to "help, aid and assist" all those means and measures designed to bring about so desired a result. It is no part of wise men to say that our present attainments are sufficient, that we know all about bee-keeping or that we should settle down on a standard frame for all sections and climates, but rather by experimentation and practical research try to discover other and better methods of carrying our bees through our severe and long winters and springs.

I took considerable pains last spring to canvass at least one town, the town of Harmony, in order to accurately estimate the death rate of bees and the causes that led thereto. And I believe when we know the particular cause we may apply the treatment or prenventive measures, and thus attain our desired results. There were 16 bee-keepers in this town the past year and the whole number of colonies put into winter quarters was 80. Three colonies were in the Torrey hives, 10 were in box hives and the rest were in the Gallup hives or some modification of it. A very few were wintered in cellars, some in house chambers, while the most of them were left on the summer stands. Those left out doors were protected by an outside hive or house with a 6 inch space filled with chaff and a chaff cushion over the frames. Now out of the 80 that bid fair to winter, only 50 came through alive, making the loss by death 37½ per cent., a fearful loss indeed! Upon careful examination I found those that died in cellars starved to death with no honey in the hive, which showed that they would have lived if there had been food enough in the hives; while 20 colonies died on the summer stands in Gallup hives and protected with chaff and outside hives, and honey in one or both ends of the hives. Twenty colonies died of starvation with a plenty of honey in the hives.

Honey to the right of them,
Honey to the left of them,
Honey by side of them,
But none above them.
Suffered and hungered,
Died there unnumbered,
Some one had blundered;
Their's not to make reply,
Their's not to reason why,
Their's but to do and die,
A score of swarms in eighty.

The treatment or preventive measures, it seems to me, are self evident. We must either winter in cellars or so construct our hives that they may winter safely on summer stands. If we could have the temperature in the hive above the freezing point all the time, and have a plenty of sealed stores, we should not lose our bees to any material extent; but so long as we cannot expect to do that, it is necessary to ward off all the cold we can. But this packing is inconvenient, and results are so uncertain that they will die unless we adopt the natural means which the bees would claim if they were able to speak. We all know that bees cluster on the approach of winter beneath their winter's store in the middle of the hive, and when the air within is too cold for them to go sideways, they naturally approach the upper part of the cluster, for the heat of their bodies and breathing keeps their combs immediately above them in a condition for their occupation. They cannot go across or sideways for it may be frosty and contrary to their nature when the air is cold and chilly.

Now if we can so construct a hive or frame that shall give depth of honey above the cluster, we shall have an additional assurance that our beess will not starve in winter or perish with cold. And further we must protect our colonies to such an extent that the temperature within the hive may not fall below the freezing point.

For the American Bee Journal.

My Experience with Foul Brood.

R. C. HOLMES.

In July, 1882, the flow of honey being good, I noticed that the bees of one of my colonies were idle and listless while the other colonies were at work. I had only to take off the cap of the hive, and lift out a frame, to find both by the odor and appearance a case of "foul brood." The concave brood caps, with perforations, the dead brood, dark-colored and ropy, and bad smell, all being present. I had read so much about it, that my heart grew sick within me, and I felt as I once did, after working half an hour in endeavoring to land a two-pound trout, and finding that it was only a "sucker."

I put the frame back and left the bees until near dusk. I then set a box beside the hive, and after smoking the bees pretty thoroughly, brushed them off the frames into the box, putting on a cover (in which was a hole about 6 inches square, covered with wire cloth), and fastened it on. I then set the box away in a dark stall in my barn, and let it stand from 36 to 40 hours. I then took a clean hive, put it on the same stand, put in it frames of foundation, and emptied the bees out of the box into it. I put on a feeder containing some granulated sugar syrup with a little salicylic acid mixed with it. The colony drew out the foundation, stored nearly enough honey to take them through the winter, and I had no more "foul brood" there.

I then proceeded to examine my other colonies, of which I had 20 in all. I found 6 other colonies infected with the disease, 4 only slightly, and 2 seriously. I determined to try some experiments, and having read your valuable JOURNAL for a year or two, and kept the numbers on file, also owning A. I. Root's "Bee-Keeping," Cook's Manual, King, Quinby and Langstroth books, I had quite a library to draw from. I took the worst case left, and placed a clean hive on the stand, in which were new frames with foundation, and brushed the bees immediately from the infected combs on to the foundation, and put on a feeder with syrup and salicylic acid as before. The colony also built out the foundation, stored enough honey for winter, and has showed no signs of the disease since.

The other 5 colonies not being as seriously affected, I determined to try and save the combs if I could. I procured a solution of salicylic acid, according to the recipe given, I think by C. F. Muth, also by A. I. Root, and a sprayer, and sprayed the combs and bees thoroughly every week, and sometimes oftener, until I thought the disease eradicated. It certainly decreased, and seemed to disappear. On looking over my bees in October, I found that it was not eradicated, and in one hive it was quite bad.

I brimstoned the bees in that hive, and buried the combs, as I also did those of the first two colonies mentioned. The other 4 colonies were in brick hives, with a cement lining inside, and I determined to try to save them. I sent to L. C. Root & Bro. for some empty combs, having none myself, and transferred the combs to some new frames, took the bees out of each hive, washed out the hives, every crevice and corner with salicylic acid, filled the combs as well as I could with syrup, and brushed the bees on to them. I have never seen any "foul brood" since.

As it is now a year since I saw the last of it, I feel that I eradicated the disease from my apiary with the loss of only one colony. I did not burn or destroy a hive. I washed them out thoroughly with the acid, let them dry in the sun, and have since used some of them. The query with me was, where did the disease come from, as it is said only to proceed from some other diseased colony.

I kept very quiet about it, only my wife and oldest son knowing of the trouble. I have several neighbors who keep bees, one, only a few rods distant, who has a colony in a cupboard, or large box in the attic of his shop. About the first of May last, I asked him how his bees were doing. He replied that they died out in the winter. I asked him if he had removed the combs, and he replied that he had not. I suggested to him that he had better do so soon, or the moths would destroy it all.

A week or two later I asked him again if he had removed the comb, to which he replied that he had, that a few of the outside combs were nice, and had nice honey in them, but that the inside ones were all rotten, and stunk so that it most made him sick taking them out. I then guessed I knew where my "foul brood" came from.

The yield of white clover and basswood honey here, this year, was better than for the three previous years, but of fall honey not enough to safely winter on, and I have been feeding several colonies.

West Winsted, Ct.

For the American Bee Journal.

How about that Foul Brood?

J. M. HICKS.

I see on page 531 of the excellent BEE JOURNAL, a short note taken the apiary department of the *American Grange Bulletin*, of September 20; and which it seems has been the cause of Mr. C. F. Muth asking the BEE JOURNAL to reproduce it, and says, "it looks so much like a slur," &c.; and then by way of reply he offers to stake $50 against $10 of Mr. Hicks' money that I (Hicks,) cannot cure foul brood without using what he calls his remedy, &c.; and still to make the matter more showy, Mr. Muth offers to wager $5 against $1 of Hicks' money that he (Hicks,) cannot prove ever to have seen a colony of bees affected with malignant foul brood. Now, Mr. Editor, let me say if I were so inclined, or ever had been a gambler, I might very easily relieve the gentleman of his $55; but having been reared under different influences, I must decline Mr. Muth's special proposition. But if Mr. Muth has really taken umbrage at that note, and thinks that I intended it as a slur on him or any other member of the North American Bee-Keepers' Society, I am sorry, as it was not so intended, but merely a question asked and reference made to the long and labored reports by certain members of the convention on foul brood, and after all no definite conclusion arrived at, except a banter by 2 or 3 of the members to stake $50 as a fund for the benefit of Mr. Langstroth in case the cure was, or was not, affected in 1 or 2 different ways, as mentioned by C. F. Muth and D. A. Jones, each of whom had a pet theory of their own, of which I need not mention now.

I thought so little of either process as mentioned by the gentlemen; especially so when it was to be tested on a wager of $50 and to be the special fund of an old and honored bee-keeper as well as a minister of the gospel. So far as I am concerned, and as being weighed in the balance with any man who desires to judge my capacity and ability of knowing what foul brood is and curing the same, I shall only say I was quite well acquainted with the disease in 1870, and lost several colonies of bees at that time, until I stopped its ravages and further spread among my bees, which has been over 13 ago; to-day I have no signs of the dreaded epidemic diseases known to bees.

Further, here let me say that I stated (when I had an opportunity so to do,) at the North American Bee-Keepers' Convention, in 1882, that an ounce of preventation was better than a pound of cure, and gave my plan of same; and that, too, without favor or reward, and have never charged a cent for giving the knowlede of same to any who so desire it. Further, let me say, so far as Mr. Muth's plan and use of salicylic is concerned, it is no new thing, and has been known for many years as a remedy, only as a failure, for foul brood. I claim no special honors for using rock salt as a preventive, which I know it to be from many years of experience, and trust it may do much in preventing such a loathsome disease as foul brood from spreading.

I am well aware that I do not know it all yet, nor do I make such pretensions, but hope to be able to guide my little pets, the bees, safely through, and reap my reward accordingly.

Battle Ground, Ind., Nov. 1, 1883.

☞ May we ask you, dear reader, to speak a good word for the BEE JOURNAL to neighbors who keep bees, and send on *at least one new* subscription with your own? Our premium, "Bees and Honey," in cloth, for one *new* subscriber to the Weekly, or two for the Monthly, besides your own subscription to either edition, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Putting Bees in the Cellar.

At about what time should bees be put into the cellar?

Monroe, Wis. N. STAININGER.

ANSWER.—At that time when you think the season is going to give them no more chance to fly. We usually wait until snow comes apparently to stay, and we do not fear to carry any amount of snow into our cellar.

SELECTIONS FROM OUR LETTER BOX

No Surplus from Fall Flowers.

Bees have done very well in this section of country, except in fall honey; the bees have not stored any surplus this fall.

JOSIAH EASTBURN.

Fallsington, Pa., Oct. 28, 1883.

How was it Done?

In the BEE JOURNAL for Oct. 31, J. H. Kennedy, Little York, N. Y., states that his crop is 75,000 lbs. from 60 colonies, spring count, but he does not state the increase. I commenced the season with that number (60); increased by aid of empty combs to 141, and took 14,559 lbs., which might, by close extracting, have been made 20,000, possibly. Now, an average of 1,250 lbs. is something that I am not quite prepared for, without knowing how it is done! Will Mr. Kennedy instruct a novice through the BEE JOURNAL? J. C. THOM.

Streetsville, Ont., Nov. 1, 1883.

My Best and Poorest Colonies.

The following is my report for 1883 of my best and poorest colony: Best colony, No. 9, cyprian, gave of comb honey, in one-pound sections, 282 lbs; extracted honey, 48 lbs.; in hives, 157; total, 487 lbs. Increased to 5 colonies. Poorest colony, No. 11, Italian, gave of comb honey, in one-pound sections, 80 lbs.; extracted honey, 25 lbs.; in hives, 105 lbs.; total, 210 lbs. Increased to 3 colonies.

FRITT'S COTTAGE HIVE APIARY.

Niles, Mich., Oct. 29, 1883.

My Season's Work.

My report for this season is, spring count, 8 colonies; 2 were queenless, and had to rear their own queens, by giving them eggs. I increased by artificial swarming to 27 good colonies. I reared many of my own queens; but had some sent me from Henry Alley, James Heddon and A. I. Root. I obtained 717 lbs. of honey (693 lbs. of extracted and 24 lbs. of comb honey). I have on hand 35 frames of good sealed clover honey for spring feeding, if they need it, and each colony has from 25 to 30 lbs. of good honey to go into winter quarters with. I sold 2 colonies (hybrids) for $10. I am going to winter my bees in three different ways. I am leaving some on their summer stands, in double-walled hives, packed with paper and sawdust; some in a repository, and some in clamps. I am using the standard Langstroth frame. I used the American frame before, but I like the Langstroth the best for handling and for winter use. WM. SEITZ.

Hustisford, Wis., Oct. 27, 1883.

How I Started to Keep Bees.

I have long contemplated writing a short note for the BEE JOURNAL, expressing in a feeble way my indebtedness to the Editor and his able correspondents, for much instruction, benefit and pleasure. It was by the merest accident I became an apiarist, and by chance a reader, yea, a student of the BEE JOURNAL. A swarm of bees settled near my place. I took them in very handsomely. In a few days an agent for a moth-patented hive came along, explained its excellence, as an agent knows so well how to do, especially to one who had not been enlightened upon the hive, by reading the BEE JOURNAL. I then thought it *the hive;* took the bait, $10 worth, for a farm right. And, again, by chance, I, this spring, became the possessor of an apiary of 30 colonies—a bold step, I hear you say; true, it was. However, by studying; by simply devouring the BEE JOURNAL and the Manual, I have been equal to the emergency. When I met rocks, shoals and quicksands, I immediately turned to my file of BEE JOURNALS, and there found the needed light. I got my bees all moved by the last of January. On the first day of February they were on the wing, bringing in pollen—there, I will leave for the present.

JNO. A. EMISON.

Mission Valley, Texas, Oct. 12, 1883.

Pollen or No Pollen.

In Bruce, Ontario, the past season was, upon the whole, favorable for bees. The early part of the spring was very backward; cold and wet continued very long, so the white clover began to appear only about June 20, but it then became very abundant and healthy, and was followed by the basswood blossoms which were very plentiful.

I see that lively discussion regarding pollen or no pollen in wintering bees is still going on. The non-pollen theory seems to me to be contrary to nature. Bees, in spite of our theories gather it wherever and whenever they can, and with very great care and skill, store it up for future use. This is taught by a law which man cannot ignore. We know also that they need pollen earlier in the season than they can gather it in the fields. Bees shut up for five months will be of little value the following season if for want of pollen they are prevented from breeding till they are placed on their summer stands.

The success of the bee-keeper in northern climes depends very much in having his hives full of young bees when placed on their summer stands; but this cannot easily be got if pollen is excluded from their winter stores. I say, then, let the bees have their pollen which they have so industriously gathered and stored under their honey. But let them have plenty of ripe honey with their pollen, or good syrup, which will do just as well; then they will not injure themselves by eating pollen, but will use it only when they need it. The want of liquid food drives them to the pollen, and too much of it will sicken and destroy them. J. ANDERSON.

Tiverton, Ont., Oct. 27, 1883.

Kansas Bee and Honey Show.

Mr. Newman: As I have not seen anything from anyone about it, I will say that they had a very nice Bee and Honey Show at Hiawatha, Brown Co., Kansas, Fair. The officers were well pleased with the display and said they would encourage that department more another year. I. W. Margrave had a nice display of comb and extracted honey, bees, queens, hives, &c. John Witschy had some nice honey and queens; the writer had 2 colonies of bees and honey, which was most all spoiled by the express agent; also, an extra fine queen was shown by D. A. Pike, Smithburg, Maryland. The premiums were on comb and extract honey, best hive and tools for apiary, J. W. Margrave, Hiawatha, Kansas; best queen, D. A. Pike, Smithburg, Md.; best colony of bees, D. G. Parker, St. Joseph, Mo. D. G. PARKER.

St. Joseph, Mo., Oct. 30, 1883.

Questions for Mr. Doolittle.

I wish to ask Mr. Doolittle what style of frame, how placed, what size, 1 or 2 stories, would he adopt if starting anew into bee-keeping, for extracted and comb honey?

C. M. MOLESWORTH.

Building Comb Upwards.

I am an amateur bee-keeper. Two years ago I started with one colony of Italian bees and an observation hive. I have been very much interested in the working of the bees, and have watched them closely this spring. I took off my observation hive, which was full from last year, and gave them room to work. I noticed that, contrary to what I expected, they did not commence to build from the top downward, but built the comb upwards from the bottom. They seemed to pay no attention to the frames and built it diagonally across the hive. What I want to know is, if filling a hive in that manner is of frequent occurrence? Although they built comb upwards they did well. I have now 10 colonies and have all I can attend to. EDGAR L. GROSS.

Springfield, Ill., Oct. 28, 1882.

[Bees do sometimes build their combs in this manner, but not often.—ED.]

Alsike Clover.

I have raised alsike clover for five years in succession, and I find it to be one of the best honey plants, while it lasts, that I can raise; bees will work on it by the side of white clover. I have been to old pasture fields that were lined with white clover and would scarcely find a bee, and then go back to the alsike and found it booming with bees. Besides, it makes the best pasture and better hay than red clover. It does not get as dusty as red clover hay, and rain does not pile it as soon. A. B. MILLER.

Wakarusa, Ind.

Sowing Mignonette Seed.

Will the BEE JOURNAL please ask Prof. Beal to answer the following questions through the BEE JOURNAL in regard to mignonette:

1. Which does Prof. Beal consider the best for bees, reseda odorata, rese odorata grandiflora, ameliorata, Parson's new white and new hybrid spiral?
2. Can mignonette be sown in drills in the fall?
3. How much should mignonette be sown in drills to one acre?
4. How wide apart should the rows be?
5. How wide apart should mignonette be planted in drills?
6. How often should mignonette be sown?
7. Will mignonette, after sown, remain permanently?

A SUBSCRIBER.

Indianapolis, Ind., Oct. 14, 1883.

In reply to the above queries, I give the following answers:

1. They are all very good. I should sow for the main crop the most common kind, and sow small plats of the newer kinds, and in this way ascertain which is the best.
2. No.
3. I should sow at least one seed to every inch in the drill.
4. About 9 inches.
5. Thinned to 4 inches.
6. In March (in hot-beds) and in May.
7. No. W. J. BEAL.

Lansing, Mich., Oct. 29, 1883.

Not a Good Season.

The season for 1883 has come to a close, and I can by no means call it a good one. My 30 colonies of bees wintered without loss, although in May and June it was cold and rained most of the time. When clover was in bloom it rained some most every day, and very little honey was gathered from basswood. In September we had two hard frosts that killed all of the fall bloom, so I had to feed one-half barrel of A sugar.

When the honey season began I had 25 strong colonies and 3 weak ones; they increased to 62 strong ones, and I have taken 1,182 pounds of comb honey in prize boxes, and the most of it is sold for 18 and 20 cents per pound. I have them all packed, sides and top, with fine oat straw, and will put them into the cellar some time next month. CHARLIE W. BRADISH.

Glendale, N. Y., Oct. 29, 1883.

Moving Hives for Winter Packing.

I have my hives scattered all over the yard, about 6 feet apart; will it do to move them all in one row, about 6 inches apart, so that I can cover them, except the front, which I wish to face to the east? Some tell me that if I move them, the bees, when taking a flight, will return to the place their hive stood before moving, and will perish. I wish your opinion.

JOHN W. STURWOLD.

Haymond, Ind., Oct. 26, 1883.

Thickness of Sections.

I have heretofore predicted that wide frames and separators for sections would, in the near future, be discarded by our best honey-producers. If we take the Chicago Convention for an example, three-fourths of the members present producing their honey without separators, we may expect to see the time soon, when they will be discarded. I get straight combs with closed-top sections, and straighter combs with small starters than with whole sheets, Mr. James Heddon to the contrary notwithstanding. In regard to the proper thickness of sections, without separators, for combs, say from 4 to 5 inches square, I would suggest 1⅜ inches; is this too thick or too thin? As we will soon have our bees packed away for winter, and will be preparing for another year's crop, can we not have some discussion on the above subject from those of experience, such as James Heddon, G. M. Doolittle, W. Z. Hutchinson, C. C. Miller and others. There are many who are undecided as to how they will secure their honey another year, and views from those of experience would certainly prove very beneficial. The experience of R. A. Burnett shows that thin combs of the same weight sell better than thick ones. Is the queen more liable to enter the boxes and deposit eggs in thin combs than thick ones? Will not the combs be built straighter when thin than when thick? Who will explain first, and benefit those to whom it may concern?

A. J. FISHER.

East Liverpool, O., Oct. 27, 1883.

Chaff Hives Wintered in the Cellar.

Mr. J. T. Matthews, in an article entitled "Cellar vs. Chaff Hives," read before the Central Michigan Convention and published in the present volume of the JOURNAL, page 299, reports having placed "3 chaff hives in the cellar" to test them on an equal footing with single-walled hives, to see the effect on "spring dwindling." As there is no further mention made of them in the article, and as there are several points besides "spring dwindling" to be taken into account in the adoption of a method of winter protection, will Mr. Matthews kindly inform the readers of the BEE JOURNAL how many pounds those colonies in chaff hives decreased in weight while in the cellar; also their condition when removed and at the beginning of the honey season.

FRANKLIN P. STILES.

Haverhill, Mass., Oct. 26, 1883.

Make a Note of it.

Bees have done very well for the kind of season; they average about 55 pounds of honey to the colony; increase, 80 per cent. They go into winter quarters in this unusual condition; no fall honey; no fall bees; no fall pollen—all old bees, with pure clover honey. Now, please remember what the result of the wintering will be, and make a note in your calendar of philosophical beedom. I speak only for my own locality.

E McNITT.

Harlem, Ohio, Oct. 26, 1883.

Open Letter to Mr. F. L. Dresser.

DEAR SIR.—On page 454 of the AMERICAN BEE JOURNAL, is an article under your signature, headed "How to Clean Wax." After giving us your method of using the Swiss extractor for that purpose, you state in the latter part of the article that you have a further addition to the extractor, by which you can render the wax white as originally made by the bees. Your article, as far as it went, was very good. Now, please state how this instrument is made, and how you use it, and then your article will be much better, and your bee brothers will find it doubly interesting.

L. JAMES.

Atlanta, Ill., Nov. 1, 1883.

One-third of a Crop of Honey.

So far as I have been able to learn, bee men in this vicinity have had a small yield of honey, this season. Perhaps one-third of an average crop; all, or nearly all of which will find a home market. A fair number of swarms was secured, and nearly all colonies are in good condition for the coming winter. L. JAMES.

Atlanta, Ill., Nov. 1, 1883.

Book Notices.

☞There is no better companion for man than a good wife, but next comes a good book, and if it is instructive as well as entertaining, the time in reading it is well spent. Dr. Foote's "Plain Home Talk and Medical Common Sense" is held in high esteem by the judges of good literature, and all classes of readers praise its clear style, enjoy its variety and profit by its instruction. Thousands have bought it and more have borrowed it, but every family should have one of its own now that the price is only $1.50, and it can be had by mail, prepaid, from the Murray Hill Publishing Co., 129 E. 28th St., N. Y. City.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the Bee Journal.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

How to Create a Market for Honey.

We have now published another edition of the pamphlet on "Honey as Food and Medicine," with more *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy 5 cents, postpaid; per dozen, 40 cents; per hundred, $2.50. 500 will be sent postpaid for $10.00; or 1000 for $15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit. Try it, and you will be surprised.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a statement of account every week.

Our New List of Premiums.

Getting up Clubs for 1884.

To increase the number of readers of the Bee Journal, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the Bee Journal will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "Our Book List" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the American "Popular" Dictionary, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

For a club of $20,—10 Weekly, or its equivalent, we will present, besides the 15 per cent, a tested Italian queen.

Announcements for larger clubs will be made hereafter.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

Trial Trip, until Dec. 31.—25 cents.

Wishing to be able to reach several thousands of the old-fashioned bee-men, and by the aid of the Bee Journal to lift them up to higher ground, adopting newer methods and progressive ideas, we make the following very liberal offer: We will send the Weekly Bee Journal till Dec. 31, *on trial, for 25 cents.* In order to pay for getting up Clubs, we will give a copy of Fisher's Grain Tables, or Scribner's Lumber and Log Book, to any one who will send us five trial subscriptions (with $1.25); for a club of *ten* we will give a cloth copy of Bees and Honey; for a club of 15, a cloth copy of the 7th edition of Cook's Manual of the Apiary; for a club of 25, we will present both the Manual and Bees and Honey. If any one wants these Books for nothing, here is an excellent opportunity to get them for a little exertion.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for ten cents.

☞ The new two cent rate of postage for letters went into effect on October 1. Three cent postage stamps will now be but little used. For all fractions of a dollar sent to us hereafter we should prefer either *one-cent*, or else five or ten-cent postage stamps, or a Postal Note. Do not send coins in any letter.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

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ITALIAN BEES AND QUEENS.

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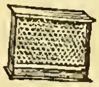

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Arranged for continuous passage ways and continuous combs, so that greater ease and rapidity in the handling of sections is gained, also a larger production of comb honey. Although patented, a legal right to make and use will be accorded to any one purchasing a sample hive, the right only to manufacture to sell or convey to others being with-held. A stand, alighting board, entrance blocks, two division boards, ten brood frames, 32 1 lb. sections and the improved section fixtures, all packed in the hive. Price of first hive, including the above parts and a special circular on the mode of management, $7.00. A fine Photo sent for 8 two-cent stamps. Orders filled in turn.

Reference: Exchange Bank, New Philadelphia.

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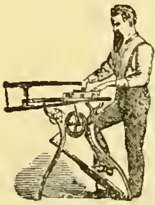
44Atf NEW PHILADELPHIA, O.



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Hand, Circular Rip Saws for general heavy and light ripping, Lathes, &c. These machines are especially adapted to **Hive Making.** It will pay every bee-keeper to send for our 48-page Illustrated Catalogue.

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Honey! Honey!! Fruit!!!

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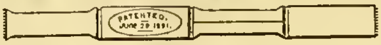

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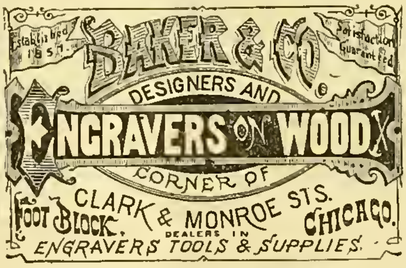

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I am now up with my orders, and can send **QUEENS** by

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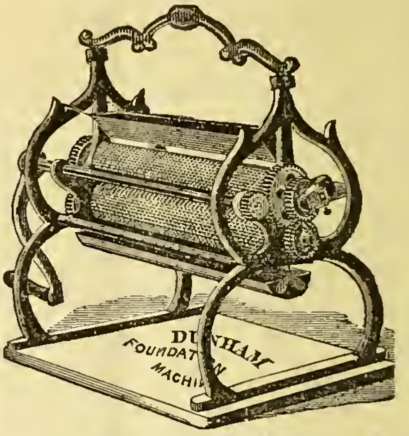

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CHARLES DADANT & SON, Hamilton, Ill.
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D. A. JONES, Beeton, Ont., Canada.
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I send you samples of Foundation which I am manufacturing on one of your machines, in sheets 9x18, which measure 11¼ feet to the pound. I think it superior to any samples of thin foundation I have seen. J. G. WHITTEN.
Aug. 14th, 1882. Genoa, N. Y.

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We will with pleasure send you a sample copy of the **Monthly Gleanings in Bee-Culture,** with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes,** all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly*, to
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Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XIX. **CHICAGO, ILL., NOVEMBER 14, 1883.** **No. 46.**

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

Mr. Gravenhorst's New Bee Book.

Mr. G. has kindly sent us a copy of his new book, entitled: "Der Praktische Imker," (The Practical Apiarist) of which we will give a short review.

On page 11, a cut represents the hive he uses. It is made of straw, after the fashion of the straw skep of the "days of yore," but its shape is such as to admit of the use of frames; all being of the same size. The base of the hive has a rectangular shape, but the upper part or cover has a cylindrical form, and is perfectly tight. This makes it necessary to have the upper part of the frames of a round form, and they are accessible only after having the hive turned "upside down."

To keep the frames in position, the upper part of the same catches in notches, in a bar fastened in the crown of the hive, while the projecting shanks, having holes, are fastened to the hive with iron pins or wire nails. The hive has two or three entrance holes, the main one being in the lower half, and the others in the upper half of the hive, being about equally distributed on one side of the hive.

As the large hives take 15 framas, of nearly the same size as a Langstroth, it enables the apiarist, by the aid of division-boards, to winter two or three small colonies in one hive. Mr. G. claims for his hive certainty of wintering without loss and rapidity of handling the bees.

The hive is especially adapted for extracting; surplus honey is obtained by side storing. Though sections may be put into the large frames, as shown on page 170, but leaving, of course, empty corners on account of the round shape of the large frame. Unquestionably the bees will winter well in this hive, but we doubt whether the yield obtained by side-storing will be as large as by top-storing.

The engraving, intended to a Langstroth hive, is quite inaccurate, for it conveys the idea that the top-bar of the frames is an inch or more below the upper edge of the hive, when it is, in fact, only ⅜ of an inch below; and as shown in the hive, the top-bars seem to be closed, which is not the case. Otherwise, the cuts and general make-up of the book are a credit to the publishers, C. A. Schwetschke & Son, Braunschweig, Germany.

One very important chapter is omitted, viz.: the one on honey plants; to provide pasturage in case of failure at certain seasons, the apiarist is advised to practice migratory bee-keeping. In fact, this is practiced to a very large extent in Germany, generally with success, especially if the distance is not very great, so as to permit occasional visits. In this case, they consider over-stocking out of the question, for upward of a thousand colonies are sometimes placed in one range.

In the chapter on stimulative feeding, in spring, besides the flour of wheat, rye, oats and peas, a diet of milk and eggs is advised. The use of the latter diet requires the hand of a master, in preparation and feeding; withal, the book shows the hand of an experienced master.

The entomological part is written in a very concise and comprehensive manner, describing and illustrating only such parts and their functions as are absolutely necessary for an apiarist to know in order to understand the economy of a colony of bees. The illustrations on page 70 and 71 are excellent, and give a better idea of the abdomen of a queen and the relative position of its parts in the body, than many pages of description.

Two remedies are given to cure foul brood; one by the aid of salicylic acid dissolved in alcohol, and the other by the use of carbolic acid. Whether or not the author has tried this remedy, he does not say, but if we remember correctly, Prof. Butlerow's attempts to use it have not been very satisfactory; because of the disagreeable penetrating odor, the bees would leave the hive within five to ten minutes after the disinfectant had been used; and much less than one per cent. mixed with their food was sufficient to poison them; but the methods employed may make all the difference.

We shall take the liberty to occasionally give extracts of such chapters as may prove interesting to our readers, and would recommend our German-speaking apiarists to procure a copy, as the book contains many valuable hints not only to beginners, but to the experienced also.

☞ We have received 3 numbers of a new French bee paper called *Le Conservateur des Abeilles*, edited by Mons. A. Fournier, and published at 27 rue Vandamme, Paris, at 3½ francs (75 cents,) a year. It represents the more progressive of French apiarists.

☞ We have received a copy of the *Dairy and Farm Journal*, published monthly at West Liberty, Iowa, and notice that the Rev. E. L. Briggs is one of the associate editors.

☞ And now comes Mr. P. Brickey, of Kentucky, with a club of 28 *new* subscribers, besides quite a number of smaller clubs. Our new premiums for clubs (found on another page,) are attracting considerable attention; and as the time is now at hand for getting up clubs, we hope to send out hundreds of premiums to enrich the libraries of our friends.

☞ We have received No. 1 of a new German bee paper—the *Deutsche Illustrierte Bienenzeitung*—edited by C. J. H. Gravenhorst, Braunschweig, Germany, and published monthly at $1 a year. It contains 16 pages, and is the best printed bee paper in Europe.

The Honey Crop of 1883.

Last June the outlook was very encouraging to the honey-producer, but alas, for human anticipations, from the 1st of July, and in some localities from the last week in June, there has been but little honey gathered, with a very few exceptional localities. The fall crop has been exceedingly light, and many are obliged to feed the bees for winter stores. Dr. W. G. Phelps, of Galena, Md., in the *Practical Farmer*, gives the following as the results of the honey harvest for 1883, in his locality :

> At the beginning of the present season, (*i. e.* of the honey flow,) the reports from all over the country to the various bee papers were as follows : "Bees bringing in honey very rapidly." "Splendid yield of honey from white clover." "The promise of a tremendous honey harvest," etc. The outlook was very promising, it must be admitted, but the results as we glance at the harvest throughout the entire country have fallen far short of expectations. At the critical period when the delicate white clover bloom was opening to the persuasive influences of the cheering rays from "Old Sol," thus it was that many a bee-keeper's heart was saddened by a succession of cold and dismal rains. To one not acquainted intimately with the effect of atmospheric changes over the secretions of honey in flowers, this may seem a trifling matter. Bee-keepers though, know too well, and oftimes to their sorrow, the direful consequences of such. Be the bloom ever so fair and brilliant, it takes certain conditions of the weather to enable the flower to secrete honey in abundance. With occasional showers, plenty of sunshine, warm nights, and southerly breezes, the apiarist's heart will be gladdened by a generous flow of honey. If contrary conditions prevail, the reverse will certainly be the case. To some considerable extent the "contrary conditions" have prevailed in many parts of the United States the past summer, and the enormous yield predicted at the start, will not be realized. This is a fact to be borne in mind by those fortunate enough to have good honey in salable shape. Be in no hurry to rush it into the market at ruinously low prices. The demand will probably exceed the supply later in the season, and you may regret a premature sale at only moderate figures.
>
> In some sections where bee-keepers, with an eye to results, have encouraged the growth and perhaps planted such crops, vines and trees as produce honey, the results have been favorable to a good yield, notwithstanding the unpropitous weather. Personally, I have found over an acre of red raspberry vines upon my place, a great advantage to my bees. The honey from the raspberry bloom exceeds in flavor and appearance even the far famed white clover honey. My acre or more of sweet clover and alsike will next year "come in pat" for bee-pasturage, even after the white clover is gone. My bees, this year, have averaged over 45 pounds per colony, with which result, considering the nature of the season, I have every reason to be satisfied. Moreover, they are well provided with ample stores for their own use—a fact that is calculated to make the bee-keeper feel peaceful about the region of the heart. If asked "Does bee-keeping pay ?" I should answer, in the light even of this year's experience, (which may be termed only ordinary,) "yes, 100 per cent. on the investment."

Beeswax, that "Wiley" Story, etc.

The following is taken from the *Indiana Farmer*, and concerns bee-keepers generally :

> EDITORS INDIANA FARMER :—The following is taken from the Indianapolis *Journal* of Oct. 17 :
>
> "Do you know where I can get some beeswax ?" inquired a wholesale druggist of the reporter. The *Journal* man didn't know. "It's mighty scarce, continued the druggist. "I want genuine wax, suitable for pharmaceutical purposes. Honey is plenty and cheap, never was cheaper than now. Honey men now pour out the mellifluous product and put back the comb. Then there's a practice of making artificial comb out of paraffine, which is growing in favor. This saves the bees the labor of making comb, and they put in all their time making honey. They don't have to go out and roam around, hunting up flowers, either, as the practice now is to feed them on glucose. As the yield of wax is light, there are a number of sophistications. Japan wax is the chief of these. It is white in color, and a vegetable product."
>
> The question is, does the *Journal* man know anything worth speaking of ? How much do you think this item helps genuine bee-keeping ? I wish you would try and enlighten the reporter a little. F. R.

The *Journal* man is not so much to blame, for he has seen this same information going the rounds of the press, in some form or another, for the past two years. Prof. Wiley originated it as a "scientific pleasantry." It has proved anything but pleasant to bee-keepers. However, it seems very strange that a wholesale druggist should be led into the same error. The paraffine - comb - filled - with - glucose - story has done the bee-keepers a vast amount of injury. But the immense amount of honey being consumed each year is a fair indication that the people at large are becoming pretty well posted in the matter.

☞ Make all Postal Money Orders and Postal Notes payable at the *Madison St. Station*, Chicago, Ill.

Are the Bees Prepared for Winter?—The *Indiana Farmer* remarks as follows about the necessity of seeing to the matter at once :

> It is to be hoped that all of our bee-keeping friends have their bees nicely prepared for the winter before this, but if any yet remain uncared for, let them be attended to at once. At least see that they have plenty of stores. The indications are that the winter will be an open one, and if such is to be the case, colonies with plenty of stores will stand a fair chance of coming through safely, though otherwise neglected. In many localities the fall drouth cut the honey crop short, leaving many colonies short of stores. Such must be fed or they will surely perish. We would deem it much more humane to brimstone such colonies, than to allow them to die of slow starvation ; besides, the honey saved from one, might save the life of another, if given before the weather becomes too cold.

☞ Mr. Jerome Twitchell, of Kansas City, Mo., has worked faithfully for severa years in the interests of the honey trade, and has created a market for that health-giving article, in sections where it has scarcely been known as a merchantable commodity before. By his untiring efforts he has built up a trade in honey that agregated, last season, some 75,000 pounds. His sales, for the present season, already foot up quite large, though he says he has been unable to get as much comb honey as he wants. and he says that he is now largely behind his orders.

He has been netting his shippers 16 cents to 17 cents per pound for choice comb honey in one and two-pound sections, and making his returns in a very few days after receipt. We note that his weekly market reports show a better demand and better prices than any other Western market.

The cashier of the Citizens' National Bank recommends Mr. Twitchell as a thoroughly-reliable, straight-forward and honorable business man. We know that he takes great interest in the honey business, and we are assured that any shipments made to him, or business confided to his care. will receive prompt and careful attention, and meet with quick returns. We take pleasure in encouraging such enterprise as Mr. Twitchell has shown. The producer is compelled to look to some good business-man to market his products profitably for him, and we think that Mr. Jerome Twitchell, of Kansas City, Mo., will fill the bill.

CORRESPONDENCE

For the American Bee Journal.

Heddon's Report for 1883.

JAMES HEDDON.

As nearly all of the readers of the BEE JOURNAL know, I have run my apiary more largely to experiments than ever before. To the greater benefit of my class of student-apprentices, and to settle in my own mind some unsettled questions, I have, in fact, made my whole apiary one of experiment upon several different mooted questions. Beginning with 133 colonies and ending the season with 298, I have made most of these experiments upon a scale large enough to avoid falling into errors in forming conclusions. The cost in capital and labor, chargeable properly to this experimenting, would reach into the hundreds of dollars; yet I feel paid for that outlay, and if the following report of my conclusions proves of value to the readers of the BEE JOURNAL, I give it cheerfully, and shall feel that I am receiving an additional payment.

My "long term" class, or those who came to stay the 5 months, number 4 men, 3 of whom had already had 3 or more years' experience with bees and modern fixtures before coming here. This class being picked from many applicants, I need not say that all were highly capable of making experiments and forming correct conclusions. To avoid any prejudice that might rest with me, gathered from results of former less extensive experiments, I placed this department in the hands of the class, and the following is their unanimous decision, if I have made no mistake:

The best manufactures of comb foundation for brood and surplus are: 1st, Given; 2nd, Pelham; 3rd, Dadant's Dunham; 4th, other Dunham; 5th, Root. Late experiments with the honey, show the Given superior in regard to the delicacy of the combs in surplus honey. Just here I will add, that justice to all, demands that I say, to my own mind, the experiments with comb foundation among the bees was not on a scale large enough to make the decision certain, but the reports given at the Northwestern Convention by Messrs. Oatman, Grimm and others, force me to the conclusion that we are correct in regard to the superior qualities possessed by the Given foundation.

HIVES.—We are unanimously opposed to double-walled or chaff hives, and in favor of wired frames *filled* with foundation; also in filling sections completely with it.

OLD VS. NEW FOUNDATION.—We find that bees work new foundation far more readily than that a year old.

BEES.—We consider the proper crosses of the leather-colored Italians and brown Germans to be the best bees for honey production.

SEPARATORS.—We prefer tin to wood, as being best and cheapest in the end. We prefer the non-separatored case to the broad frame and separator system. I will here mention that, for the sake of a comprehensive experiment, we made 300 one-story broad-frame supers (all admitted them to greatly excel the two-story broad-frame super, possessing advantages that no other style of surplus receptacle does,) and used them with 350 of our cases, yet, all in all, we prefer the cases and the non-use of any separators.

SURPLUSAGE.—We prefer the top of the hive, and consider it the only place where it is best to place surplus receptacles. We find the tiering-up system to work admirably, and prefer it to all others.

SECTIONS.—We greatly prefer all dove-tailed sections to any other.

HONEY BOARDS.—After giving this matter a radical and careful test, we find that the bees pass into the supers and cases through the skeleton honey board and double-spaces as readily as where no honey board is used; the sections coming within bee-space of the brood frames. We favor the honey board as greatly assisting in the easy manipulation of the cases.

HALF-POUND SECTIONS.—We find that we can get as many or more pounds of honey stored in half-pound as in pound sections, used either with or without separators. Our experience is that the bees finish them up faster than the larger sizes.

Regarding this system of teaching apiculture, we believe it to be the best extant, viz: to learn, by practice, the ways and means of practical and successful bee-keepers.

In this locality we have not had an average honey season for 3 or 4 years past; the one just passed being the poorest of them all. I do not remember ever witnessing so cold a summer and fall. Not only this, but at one time of year the rain badly over-did the business, while our fall crop was a total failure on account of drouth. Could I have had the season mapped out to me in advance, I would have prophesied—"no honey."

Notwithstanding all, bee-keepers in this section have some, and by improvements in methods of manipulation, we have a crop as good as any of the 3 years past. Our crop report may be found in round numbers on page 528 of the current volume, and it is just that we here add that the fall shortage made room for the fall-feeding of 2,000 pounds of sugar, leaving our credit from the 133 colonies rather a large and healthy increase and about 2,000 pounds of extracted and 4,000 pounds of comb honey, about one-half in one, and the other half in half-pound sections. We expect to use only half-pound sections the coming season, except the finishing up of the pounds now on hand and partly completed.

Our experiments in wintering, which will be made upon an extensive scale and radically tested, are of course still before us and must be left to the decision of my class of 1884 and myself to report June 1, 1884, when a full description of the tests and results will be given through the BEE JOURNAL.

The season's experiments have not reversed any of my conclusions, but one test has very much modified one of my decisions, which I take pleasure in frankly stating to the reader. We find that separators retard the work in the sections but little, and I now see where my assistant and myself miscalculated when experimenting with separators some 4, 5 and 6 years ago. We used a row of six 5x6x2 sections, with tin separators between each section, and *glass* at the outside. Like Mr. Turner, we then thought the glassing method a good one. Well, as most of you know, bees are slow to finish off honey next to glass, and when a tin separator stands on the one side and a pane of glass on the other, the foundation between them is often deserted and hardly touched, when many of the inner combs are nearly completed; you plainly see the difference between the sight that presented itself when we peeked through the glasses of the non-separatored and the separatored sections. The glass was more at fault than the separators, though we learn by this, as well as by other experiments, that separators can in no case be any advantage to work in sections, and in most instances a disadvantage of greater or less amount, according to the other conditions surrounding the apiary, hives and bees.

Advanced apiarists have tested and discarded glass in all forms as connected with the storing of surplus honey, and, I predict, never to return. "History repeats itself," and no less so in apicultural appliances; and long after false and abortive methods have been proven so and laid on the shelves of oblivion by advanced bee-keepers, some of the less experienced, ignoring all that has gone before, dig open the grave and resurrect some of these old errors and ask us to use glass and the complicated, expensive and worse than useless outer cases, that necessarily goes with it, to shut off the daylight. To throw aside the Langstroth space above the frame, that invented and patented claim, which above any other gave us apiculture as a business, deserves the highest condemnation.

Dowagiac, Mich., Nov. 1, 1883.

For the American Bee Journal.

Losses of Bees in Winter.

JAMES POINDEXTER.

History and time often bring to light facts which scientific investigation fails to reach. What do the records of the losses of bees for the last ten years show? First, that the mortality has been greater or less according to the cold or warmth of climate in which they were situated; and secondly, that the losses have been much greater during cold winters than in moderate ones.

Commencing with the winter of 1872 and 1873, a very cold one, great mortality of bees was reported; next, 1874-

75, a similar winter as to temperature, with similar reports of losses; and we might go on and select the cold winters by referring to the American Bee Journal and noting when the losses of bees occured.

It has been urged that the excessive humidity of the atmosphere during cold winters was the cause of the losses; if so, then why are there exceptions of those who invariably winter their bees without loss, or nearly so? Would not the natural dampness affect all the colonies alike? While we admit that dampness has much to do in disastrous wintering of bees, we regard cold as being the root of the trouble; by preventing the moisture which emanates from the bees from escaping outside the hive.

Pollen has been mentioned as the cause of losses of bees in winter. If it was, why do some colonies of bees winter successfully, without removing a frame on account of the pollen in it, in preparing them for winter? We pronounce cold the prime cause of the general losses of bees in winter. Is it not a fact that those who winter bees most successfully keep them warm, either by cellar, packing, or otherwise? Has their been substantial evidence offered to prove that cold was not the cause of bee mortality in winter?

Bloomington, Ill., Oct. 15, 1883.

For the American Bee Journal.

The Pollen Theory and Dysentery.

N. M. CARPENTER.

From a rational point of view, the theory that pollen is the cause of dysentery is entirely unreasonable; it is inconsistent with the laws of nature. It is well known that animal instinct leads to those habits which result in the perpetuation of existence, and when man interferes to divert any animals from their natural instincts, the usual result is to weaken the power of self-perpetuation, and the honey bee is no exception to this rule.

If it were not for "the good of the bee" to gather and store pollen in the hive, they would not do it. The interference of man with the natural habits of any animal *never* results in an increase of their power to live. In every department of animal life it seems to be the primary object of nature to give just those instincts, which if not interfered with, will most surely secure and perpetuate animal existence. The idea that the honey bees makes the eggregious mistake of putting into their hives just the thing to destroy themselves, is not only a great absurdity, but contrary to all natural law.

Now it is too often the case that when one fancies that he has developed an important theory, every seeming fact which may be made to support that theory is quickly seized upon, while those having an adverse bearing are ignored. In the earlier years of bee-keeping, what bee-keeper has failed to find, when "taking up" an old colony in a box hive, a most disgusting abundance of pollen; and it is well known that if such hives were let alone, they were likely to winter well and throw out an early and bouncing swarm. It is a significant fact that some of those who are the most ardent advocates of this non-pollen theory are not remarkable for their successful wintering. With my views of the question, I have not hesitated to test the matter in my own practice; and perhaps it would not be out of place to relate a little of my own experience.

Last fall for some reason the broad frames of my hives had the greatest amount of pollen that I have ever seen in a 20 years' experience in bee-keeping. The frames were about one-third full of well-capped honey, and the space below the capped honey, in a large majority of the frames, was from one-half to two-thirds filled with pollen. The size of my frame is 10x13, and in preparing my bees for winter, I gave them only 5 of these frames. I removed no frames on account of the pollen they contained, consequently most of the colonies in my 76 hives were clustered directly upon the pollen. Now, if this pollen theory was correct, I ought to have expected to see my hives pretty well daubed in the spring; but the consequence was that only 5 out of the 76 had dysentery at all, and only 1 of those had it badly; and it is well known that there was a very great tendency to the development of the so-called dysentery all over the country last winter. This is, of course, only one fact; but it bears pretty directly upon the question. I have others of the same nature but will not detail them at this time.

Now, with my views of the question, and with these facts in view, I do not take any stock in the theory that pollen is the cause of the so-called dysentery, which in a majority of cases, is no dysentery at all, but simply a diarrhœa; and I am perfectly willing that Mr. Heddon, or anyone else, should have all the honor there is in fathering this most unreasonable, and I think, unsupportable theory.

Ellington, N. Y.

For the American Bee Journal.

The New Races of Bees.

B. F. CARROLL.

As Mr. Doolittle can enjoy a good thing when he gets it, and can shake his sides in a good hearty laugh at the expense of the ignorant, I want to tell him how much fun I had with a colony of Cyprian bees, presided over by a sister of the queen he has.

Last spring I had a young man to help me divide some bees, and this Cyprian colony was one. Putting on a good veil and a pair of heavy gloves, he thought he was proof; so he shouldered a Bingham "conqueror" smoker, filled with cotton seed that emitted a cloud of smoke, forgetting there was a small hole in his hat. I had got fairly to work when I saw the young man was ready to stampede; seeing a host of angry bees crawling into that hole, I encouraged the young man to stand firm, but they not only found the hole but were using their darts freely on the young man's head; down went the smoker and off goes the young man to the house with a train of bees after him. I enjoyed this finely, for not a single bee paid any attention to me. I worked on without smoke until I had finished the division.

The queen I let Mr. Doolittle have was from a fine imported queen from D. A. Jones, and was mated by drones from the old A. I. Root Cyprian queen. As these were the only drones in my yard, and as Mr. D. wanted a pure Cyprian, I sent him one of four queens reared in the fall of 1882 (November,) from this D. A. Jones' queen—all 4 were about equal, so far as temper is concerned. From the Doolittle reared I queen 20 queens; 10 of these are now in my yard, and these are as gentle as Mr. D.'s or any other Italians.

I have another imported Cyprian that has a somewhat better temper. I now have only 3 colonies of Italians, over 80 colonies of pure Cyprians, and shall keep in my own home apiary none but Cyprians. I opened the colony several times from which Mr. D. got his queen, without smoke, and brushed the bees off the combs to cut out the queen cells, and did not get a sting! I use but little smoke in handling my bees, and I think if Mr. D. would use little or no smoke, he will get along better. I can send him another queen that I think is pure, that is of the gentle kind, but think daughters and grand-daughters from his "Carroll" queen will be an improvement every time. I know these bees to be superior to the Italians, and want no others. My wife assisted me to extract from all, in July and August, without gloves or veil, and did not receive a single sting until we came to the colony of Italians.

As before stated, Texas is the home of the Cyprian bee; they may not do for New York. Syrian bees are, with us, considered good—better than Italians; being a hardier race, they stand our windy springs better. I have tried these bees two years and can say that they are good for Texas. It will not do to handle these bees (cyprians,) in damp or cold weather. I have opened and carefully examined nearly all of my hives to-day and yesterday, and not an angry bee did I see. I would rather be stung by a bee than to be bitten by a flea. The latter swells my flesh and hurts for hours; a bee sting seldom swells, and in 2 minutes afterward I do not know it. Hang on, Mr. D.; try them one more year.

Dresden, Texas, Oct. 17, 1883.

For the American Bee Journal.

One Thing Lacking.

DR. W. G. PHELPS.

The "make-up" of the average periodic bee literature lacks one conspicuous and important feature—simplicity. Of the editorial matter we have little fault to find, but the average contributor seems to delight either in combatting some real or imaginary opponent with ponderous words and scientific phrases or to air his theoretical knowledge with a lot of high-sounding—bosh. Editors, as I take it, aim to publish bee papers that shall be acceptable to the beginner, as well as to the average reader. Who constitutes the average reader? Is he a scientist? Is he a professional man? No; the average readers are plain common sense farmers, artisans and laborers. In saying this I say nothing disparagingly of them, for though owning a professional title, I am proud to class myself among the average readers. What do we want, therefore, as we look eagerly over the pages of the different publications? Do we "hanker" after a "set-to" between Mr. Find-fault and Mr. Cross-grain about the infinitesimal portion of an inch which the yellow bands should be apart on the golden Italians? Are we "almost dying" to know whether a specific microphyte is an existing feature of modern hives? I trow not. If, therefore, the average reader is not;what shall we say of the beginner?

I have seen able practical bee-keepers turn with disgust from the tiresome argumentative articles that too frequently grace (?) the pages of certain bee papers. Not that they failed to understand them, but that they desired more practical matter. When first entering the ranks, some 12 years since, I well remember how eagerly and thankfully I perused such plain and common sense articles as occasionally greet our eye in the columns of the bee papers. Stripped of useless technicalities and scientific terms, they seemed as oases in the desert of matter served up as bee literature. We need *more* just such practical talk, that will actually *teach* the beginners and still prove acceptable to those farther advanced. This is not to be understood as a plea for simple "childish twaddle" in bee papers; but what we do want is the cultivation in writers of that happy faculty of writing wisely, yet in plain everyday language, so that a man, though a beginner, may not err therein. I believe in this that I only emphasize the voice of many readers, and that if the above suggestions were acted upon, several well conducted bee papers would become doubly interesting. "A word to the wise is sufficient."

Galena, Md., Oct. 10, 1883.

For the American Bee Journal.

Discussion, a Valuable Means of Arriving at Truth.

J. E. POND, JR.

Discussions on matters of interest and importance are considered valuable in most questions where differences of opinion arise, and, as a rule, are conducted amicably and in accordance with logical and parlimentary rules. In matters connected with apiculture, more than in any others, it would seem that such discussions might be carried on, but I am sorry to see that such is not the case. There always have been and always will be, I presume, differences of opinion existing on theoretical matters, and the only way I know whereby truth can be evolved and correct notions established, is by full, fair, free, amicable and impartial discussion. Opinions are of more or less value, depending upon the amount of practical experience behind them and the mental calibre of the experimenter.

Bee-keeping as a science can be only learned by study and experiment. and as a valuable aid to the study, come the various reports we find in the BEE JOURNAL from different localities throughout the country. Reports alone of what is done simply,—the amount of honey gathered and the number of colonies kept—amount to but little as an aid; what is desired is to know the process by which this or that result is brought about, the style of hive, form of frame, &c. Right here, however, is where we "run against a snag." If one gives a report claiming the results are owing to a certain frame, or if an argument is made showing up the valuable qualities of the frame, the next issue of the BEE JOURNAL is full of articles which instead of being argumentative, seem written for the sole purpose of venting spite; and why? Simply because the frame praised does not meet the approbation of the writers. The idea some seem to carry is that certain frames ought not to be used, no matter how good results are obtained from them. One writer informs us that a certain frame will not winter bees safely; and when he is informed that bees are wintered safely in them, he says I don't care if they are, they ought not to be; and I once tried to open a hive containing those frames and got stung, while I did not get stung at all in opening a hive containing frames of different style. So goes the battle. I don't know why it is that bee-keepers cannot discuss a question of apiculture fairly; I simply know they do not.

I am sorry that such is the case, as beginners should know what is the best, and the only way to determine that, is to take the statistics and ascertain from them. The discussion does not end with frames, either; else the matter would not be as bad as it is. No matter what question comes up, there are found plenty to oppose; and that too with a vehemence worthy of a better cause. Suppose a beginner wishes to know the best plan of wintering? He naturally looks over a file of the BEE JOURNAL to ascertain the advice given therein, supposing very naturally that he will learn something of value to him; but does he? The poor fellow finds one giving advice in a certain direction; another opposing it at a terrible rate. One advising upward ventilation, another claiming *that* directly at variance with natural laws, etc., till at last he sits down in despair, saying: "I don't see as it makes any difference; all are wrong and all are right. But what shall I do to save my bees?"

There are matters connected with bee culture on which there is no dispute; there are other matters which are disputed, and which should be discussed in order that the truth may be discovered. These are matters of real importance, and should be discussed freely and fully, There are still other matters in dispute (and these seem to be the ones on which the most venom is displayed,) which are simply matters of *opinion*, and are of little value, as one way is fully as valuable as another, the question being more one of convenience than of practical utility. These latter questions need no particular discussion or explanation. One man can best operate with one style of extractor because he is most used to it; another prefers a certain style or form of section-case, or wide frame, because he can manipulate it more easily than another; and really it will make but little difference to the beginner which style he does use, but when it comes to the question of what frame shall I use, or what plan shall I adopt for wintering, it strikes me that there is still room for argument. There is a best style of frame, and there is a best plan for wintering. Now let us discuss the matter with all fairness and in an amicable manner, and try to get at the truth, if possible; drop prejudice and opinion, as opinion simply. If you have any arguments, present them, and give others the same privilege, and at last we shall ascertain more nearly the truth than by any other means I know of.

Foxboro, Mass., Oct. 31, 1883.

For the American Bee Journal.

Essentials of the Coming Hive.

A. WEBSTER.

I have felt a lively interest in the improvement of bee-hives ever since I have kept bees, which is over 25 years. There are many natural laws that have an important bearing on bee-hive construction, but inventors are apt to give undue prominence to one or more points, which are made much of, to the neglect of others which are, perhaps, of equal or even greater importance. Nearly all who have written on "the coming hive," "a standard hive," "standard frames," etc., seem to take it for granted that some one of the hives or frames now in common use should be adopted as such.

I think that advanced bee-keepers in the latter part of the 19th century should do better than that; and look for a hive constructed on a new and scientific plan, and a new system of manipulation and management, that by its adaptation to the natural instincts of bees and the requirements of bee-keepers, shall commend itself to enlightened minds, and not need the formal endorsement of conventions and societies. Those who do not appreciate applied science will, of course, be free to keep bees on Adam's, Samson's, or any other plan they may choose. Of the improvements of the past, movable comb frames must be retained, but of an entirely different construction from those now in common use; and should be *fixed*, and reversible as well as movable. Extracted honey has become a staple article, and its production must be provided for.

Section boxes for comb honey are so convenient and popular, that the best possible system of using them should be adopted; and be of a sufficient number of different sizes to meet the requirements of all—for home use and market—which should be of such proportionate dimensions as to be usable in the same hive without change or alteration of hives.

Comb foundation of pure wax in both brood and surplus departments are too valuable to be neglected, and interwoven wires to hold it firmly in place in the center of frames for brood and extracting, are too useful to be rejected until something better is provided.

Cushions or packing of chaff, sawdust, moss or other porous substances, or confined air, may be used to economize heat in cold seasons and climates, and occupy space on the top and on all sides of the brood chamber, used for surplus storage in the honey season, or gained by reducing the size of the brood department to correspond to the contracted size of the cluster of bees in winter and spring.

I will here summarize some of the essential points as follows: It must be perfectly adapted to either large or small colonies of bees, at all seasons and in all climates. To secure this the brood department must be deep and capable of any required amount of contraction or expansion, on all sides alike, by removing or adding comb frames. It must supply abundant room for surplus storage as closely as possible to the brood combs, with free continuous passages. It must be equally adapted to comb or extracted honey; using sections or frames for surplus, as may be required, without change or alteration of parts. It must be easy to manipulate for all purposes, with the least possible danger of hurting or angering the bees. It must be of simple construction, rejecting all unnecessary parts and complications, such as entrance blocks, second stories, division boards, separators, honey boards, cases, clamps, racks, crowders, etc. There are several minor points that I will not stop to enumerate, but all are in harmony with the above.

I am looking for the "coming hive," and shall continue to do so until it appears. To show that looking with me is not idle watching and waiting to see what others are doing, I may be allowed to state that I have at several different times devised, constructed and tested hives that embodied my best ideas at the time, and now have hives in use that seem to be right in plan, and only require to be perfected in the details.

South Northfield, Vt.

For the American Bee Journal.

Shall we Clip our Queens' Wings?

W. H. STEWART.

It may, perhaps, be thought by some that enough has already been written on the subject of the coming bee, but when we consider that the question of financial success or failure in bee culture must eventually turn on this one point, we realize that we cannot investigate the matter too closely.

What is the coming bee? It cannot be the common brown bee; the importation of the Italian, and other races of queens in such vast numbers has fixed the fate of the old brown bee. What is left of the pure brown blood must soon be superseded by the various mixed breeds, and soon will only be known in history.

We are of the opinion that it will not be the pure Italian, from the fact that the "new broom" has become somewhat old and fails to "sweep clean." The fever for bright yellow stripes is fast cooling down, and honey producing bee-keepers are beginning to learn that a cross between the different races gives better workers and more honey. Some queen breeders are already awake on this important point, and are putting into the market queens that are bred for paying qualities rather than fancy colors; and there can be no doubt but the coming bee will be much superior to any that we now have, if we manage wisely.

It will be well, however, for us all to be mindful that after all the most careful and judicious crossings have been made, we may, by other improper management, defeat the very purpose for which we are laboring. If the bees were left to manage their own affairs, in their own natural way, then the law of natural selection would dictate that none but the fittest would survive; and that "survival of the fittest" means "improvement of the stock." That improvement would be slow, yet it would be sure—all the same. The most prolific queens would produce the most young swarms, and the best winged drones would meet the most queens; and also, the best workers, would produce more combs and store more honey for breeding and winter supplies. But when we take control of them and dictate what shall be their conditions and surroundings, then it is better that we go a little slow and careful, lest we in our eagerness to advance our own present interest or convenience, do a great injury to the bees; for when bees are injured, then it is that apiculture suffers at a corresponding rate.

Longevity is a most desirable quality in the coming bee, and anything that shortens up the *working days* of the bee is all the while sapping the very foundation of bee-keeping. It is well understood that our present bees live from September until April or May following, and be it understood that it is during these cold months that bees in the northern climate are subject to disease consequent to cold and confinement; and yet while struggling against these unfavorable conditions, they are found living 6 or even 8 months, yet in June and July, and a part of May and August, they only live about 6 weeks. Now, why is this great difference in the longevity of bees during the different seasons of the year? It cannot be that proper exercise in the open air is what shortens up their life in summer, for we know that when they are diseased in winter a good fly in the open air restores health and quietude. This fact alone is ample proof that outdoor exercise is not what shortens up the life of the bee in summer. One writer has expressed his belief that bees in summer work themselves to death. I cannot agree that this can be true from the fact that natural law dictates that all animals live by their own efforts; and we find them prosperous just in proportion as they are able to surmount obstacles and overcome difficulties that they encounter. Labor promotes health, but indolence weakens it.

Each creature is endowed with faculties or members, the functions of which are adapted to the performance of the work of procuring a livelihood, and if any one or more of these members are by accident or otherwise disabled, then the creature labors to a disadvantage, and its life is shortened just in proportion to that disability or inability to procure a livelihood. A proper exercise of any one or more of these members increases their strength and dimensions, but inactivity renders them weak and dwarfed; and long continued disuse reduces them to mere rudimentary conditions.

While the above is true, it is equally true that over-work or excessive strain would injure any member of the bee or any other animal. I hold that incompetent wings and wing power is the chief cause of the shortness of the summer life of the bee. The first indications that such bees are failing in summer, is the torn and ragged condition of their wings. It would appear reasonable to any rational man that if one bee having perfect wings, and another having its wings torn and ragged were at the same locality and a long distance from home, each equally loaded and having to face an opposing wind, there would be a survival of the *fittest*, while the other would perish.

We have no proof that the general health of the worker bee, at the age of 5 or 6 weeks in summer, is more impaired than that of the bee of the same age, in inactive life, in fall or winter; or that the former would die any younger in summer, if it could have perfect wings, than would the latter in confinement. It is true that the former is exposed to birds and storms, but it is equally true that the latter suffers equally as much from confinement and its attendant results.

Let us consider for a moment what we are doing with our bees. Some are expending thousands of dollars and years of valuable time in breeding up bees that show the greatest number of and most brilliant stripes. Others are striving to produce large bodies; others trying to produce tongues long enough to work on red clover; others trying to produce a red clover having shallow tubes to fit the tongue of the bee; others (more practical) are working for the production of bees that manifest the greatest honey-gathering qualities. All seem to be hopeful that they will attain to those desirable ends.

Now please allow me to ask: What would we think of a man that would advertise that he was trying to raise a superior stock of yellow queens and using black queens and black drones for starters? What of another who was striving for the development of long tongues, and all the while depriving the mother-queens of their tongues? What of another that was working for large bodies, and all the while using the smallest queens for breeding stock? We would pronounce them all crazy, or at least most woefully inconsistent. Are not many bee-keepers (and some who claim to be teachers,) virtually acting just as inconsistent? All will agree with me that a bee may have bands, (or stripes,) color, long tongue, large body, and ever-so-much energy, and yet with feeble wings, or no wings, all these faculties or qualities would be unavailing.

I have thus led the readers along this pathway, over which I felt assured they would willingly accompany me, until we have arrived at our present stand-point. See how hard we are trying to improve our stock, and then what next do we do? Why, we just allow our young queens 5, or perhaps 15, minutes to meet the drone, and then cut off her wing, or wings, and never allow her to fly again. We thus throw her flying members into disuse, and as I have shown, continued disuse renders a member or faculty rudimentary.

Again, all will agree with me that a mother can by no possible means transmit that which she doee not possess; and furthermore, that the offspring cannot inherit that faculty or quality which the parent was unable to transmit. If it be asked: How then can the stock be improved? I would answer: An individual, after birth, may, by proper management, have its members or faculties developed to a higher and better condition, and that improvement may be transmitted to its offspring. The improvement of the race can also be made, to a certain extent, by the crossing of the different breeds. If a faculty or member of the individual becomes weak by disuse, then that condition of weakness may be transmitted to the offspring. Disease may be transmitted from parent to offspring; weakness is only another name for disease.

I would ask bee-keepers a question, which they will please answer through the BEE JOURNAL. In view of the above truths, which queen do you think would transmit to her offspring the greatest amount of wing power? The one that is deprived of her wings, and those members all through her life being in a dormant state, or the one that is allowed to retain her wings and compelled to fly as often as circumstances would justify?

If I were offering queens for sale, as superior stock, I would compel the brood mothers to fly often, even if I had to toss them up to give them a start.

Orion, Wis., Sept. 14, 1883.

☞ The Northwestern Bee-Keepers' Society will meet in La Crosse, Wis., Friday, Nov. 16, in the City Hall.

E. MARKLE, *Pres.*

For the American Bee Journal.

Comb Honey without Separators.

ALFRED GALE AND WIFE.

We will here give our experience in producing comb honey, with and without separtors. We got our first one-pound sections in August, 1880, and used separators; about one-half of the combs were more or less fastened to them, and we had to put all that touched the separators back into the hive to be finished up without separators. We tried a few racks the next summer without separators; there was at least one-fourth of them which we could not crate. These we sold at home. This season we had 1,200 pounds of marketable honey, and 200 pounds not finished up, which we kept for home use; and of all this there was not 20 pounds which we could not crate.

Now for the way we did it. We take thin comb foundation, cut in a triangular shape, large enough to go the length of the groove in the section, and kept watch of them after they were on the hive to see that none of them bulged into the others. If there were, we cut it off evenly, and put it next to one with a smooth face. The hollow one, if some of it was capped, we cut the caps off, and put it next to a smooth one, and the bees filled it up nicely. We have sold all our honey; at home we could get only 15 cents per pound.

We took the first honey off on July 10th, and sent a few sample crates to a merchant on South Water street, Chicago, on the 15th; and for this we got 22 cents per pound, and from that to 17 cents, the lowest. We sent 10 crates per week. Just when it was nearly all gone, he wrote to us to send 30 crates per week, as he had places to sell it. We put our honey in twelve-pound crates, having a label on each section; the crates were neatly made, with glass in front, and wedged tight on the back. We had no honey damaged in shipping. If we had 3 tons more we could have sold it all "like hot cakes."

Shelby, Ind., Oct. 18, 1883.

For the American Bee Journal.

The Cause of Fertile Workers.

J. B. MASON.

What apiarist of any note is there who has not been troubled with fertile workers? and which of them can give an absolutely correct solution of their cause? Many theories have been advanced, from time to time, in regard to them, none of which, I apprehend, satisfied their author any more than those who read them. Why, again, is the term "fertile" applied to these egg-laying pests? A "drone-laying queen" is called unfertile, then, why call a "laying worker" fertile when we know it is impossible for it to become fertilized? I trust the term "fertile" will be dropped entirely, and the correct term, viz.: "laying worker" will hereafter be used in its stead. Had the bee-keepers in the past, and more especially those who assume to be teachers, been more careful in their choice of terms and statements of results, the science of apiculture would be far in advance of what it now is! It behoves us, then, to use great care in making statements, and avoid the use of ambiguous or double-meaning terms.

The old explanation of the cause of laying workers, or, at least the way in which they derived the power to become such, was that they were reared in the immediate vicinity of queen-cells, and partook of a portion of the royal jelly, in those cells; this idea or explanation is now fully exploded, and bee-keepers to-day are striving to find a correct solution of the problem. It has been stated that they are only found in a colony that had long been queenless; that only one exists in the hive at at time; that one is reverenced as is a queen when present; that colonies containing these "laying workers" cannot be induced to accept a queen; and many other curious, not to say ridiculous statements have been made in regard to them, none of which are susceptible of proof, and many of which show themselves on the face, to be errors.

I have given some attention to this matter during the last three or four years, and while I have not discovered the real cause of the presence of laying workers in a colony, I have ascertained that they are present, and actually sometimes deposited eggs in the cells when a fertile prolific queen is in the hive. This I have seen several times. I have also seen several "workers" laying in the same hive, at the same time, with no attention being paid to them by the bees.

If the organs of the laying worker from some cause are partially developed, we should expect to see some change in their form by which they could easily be discovered, but such is not the case; the only way in which they can be found, is by seeing them in the very act of depositing eggs. This I have seen many times, and have found no difference in the appearance of those laying, from any other worker. I have found laying workers in a hive that had not been queenless over twelve days; this laying worker being many days, and doubtless weeks old. This last fact does away entirely with the royal-jelly-eating theory, and is *prima facie* evidence that any worker has the power, under certain circumstances, to lay drone-producing eggs.

Queens have been reared at a time when no drones occupied the hives, but ere long drones have been found, and the queen has been fertilized by them; at least no other solution could be given of their fertilization, except that they were fertilized by these drones, and no solution could be given of the existence of these dones, except that they came from the eggs of a laying worker.

In the matter of introducing a fertile laying queen to colonies that contain "laying workers," I regard it just as safe as in introducing to a colony that has just had its queen removed; aye, and even safer, as a rule. It is true, that exceptional cases may occur, where a colony having laying workers may refuse to accept of a queen, or even a cell; but, does not the same occur at times with colonies that have just had their queens removed?

We must go slow in matters connected with bee-culture; a vast field is open before us from which to glean facts and gain information, and he will prove the most apt scholar who throws prejudice and preconceived notions aside and accepts facts as he sees them. It is very pleasant to start a theory, and then endeavor to bend facts to it, but the better way, and the only one by which truth will be discovered and error rooted out, is to form a theory from well-established facts.

If it is true that some of the new races of bees are particularly prolific with "laying workers," a grand chance now offers itself to make some valuable discoveries in regard to them. Let us all take hold of the work and do "our level best" to find out the truth.

Mechanic Falls, Maine, Oct. 3, 1883.

Prairie Farmer.

How to Secure a Runaway Colony.

MRS. L. HARRISON.

A farmer lately called my attention to a runaway colony of bees that had taken up their abode in a hollow limb of a large maple tree. He said that his adjoining neighbor had recently cut down a valuable tree to obtain honey from a swarm located in it and only obtained about two quarts. This sacrilege certainly did not pay; it takes time to grow trees; moreover honey all mashed with bee-bread, dead bees, rotten wood, dirt and leaves, is poor pay for the labor expended, say nothing of the value of the tree. The limb that contained the colony our attention was directed to, was low, and consequently of little value, and might have been cut off without damaging the tree. If we were going to direct its removal, we should have all apertures leading to the colony securely closed, so as not to be annoyed by angry bees. With this end in view, muslin might be wrapped around and tied securely in place, all protruding limbs and sound wood sawed off, care being taken, meanwhile, not to interfere with their nest. The limb containing the colony should be secured with ropes so that it could be lowered gently, when it is sawed off.

To secure the best results from a colony obtained in this way, set them up where they would be seen when they swarmed, and put the issue into movable frame hives; when they were through swarming, the log might be split open and the comb and remaining bees transferred to a hive, or the limb kept for its yearly swarms and as an object of interest. The fall flow of honey in this locality has been a failure, and if the colony entered the tree late in the season, they have little honey and it would be a pity to destroy them for it. The owner of the tree thought he might put boxes on to the limb and secure honey in this way, but we should not think this practicable.

A few days since a gentleman called to inquire how to feed a colony of bees in a nail keg. He said that "he had put a box of feed on top, bored a hole, and he could not get them up." We told him to put several spoonfulls of syrup down the hole at night, so as not to attract the robbers, and put a little from the hole to the feed and they would soon find it, and continue doing so and they would come regularly to be fed, like chickens.

Peoria, Ill.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Queries on Hives and Sections.

Will Mr. Heddon please answer the following:

1. Are your hives for 8 frames and 12 inches wide?
2. If you were starting anew would you not turn your frames cross-wise? If not, why?
3. Would it not pay to winter on less frames and shorter ones? My colonies that could not get inside of two-stories in summer, are now clustered in one-third of one-story. This looks bad.
4. Do you prefer a two-story hive for extracting, and how deep should the frames be?
5. Would the Langstroth frame not be much better for nursing bees in spring, rearing queens and extracting, if the frames ran cross-wise? I would not give 25 cents per colony to get my bees insured to winter well, but would give much more to know how to prevent spring dwindling.
6. Would you not prefer perforated metal for a honey board? If not, why?
7. Is the unwired Given foundation as strong as the Dunham when of the same thickness?
8. Will you please tell the best way to mitre the edges of the hives to prevent the wet from warping when tiering-up. CHARLES MITCHELL.

Molesworth, Ont.

ANSWERS.—1. Our hives are for 8 standard Langstroth frames, and are 11½ inches in width, inside measure, in the clear.

2. By no means; for many reasons. The main ones being that the bees can get at their honey much more readily during the winter than when the frames run crosswise. That with the entrance in the end of the hive we can incline it so as to keep out water and pour in feed, and assist the bees in house cleaning. I prefer to have my bee entrance across the ends of all the frames. The long frames are not only the most economical in construction, but in their manipulation.

3. No; but it might pay to winter on less frames and longer ones. We are, the coming winter, making experiments upon wintering on different numbers of frames. I should have no fears of the small clusters, they can be wintered as certainly as any, by proper management. They need better protection from the cold, and see that they are clustered in that part of the hive where honey is the most plentiful and bee-bread the scarcest.

4. For my use, all brood-chamber frames should be standard Langstroth. The frames for the extracting super, I would make the same size, if I was producing honey for manufacturing purposes; but if for sweet sauce, I would make them about one-half the depth, working the supers on the tiering-up system, as laid down by Chas. Dadant in his invaluable little work on extracted honey. After two thorough trials, of 32 colonies the first time and 50 colonies the second time, each run two or three years on the horizontal system, I very much prefer the story system of producing extracted honey.

5. In the matter of queen-rearing, I think the crosswise frames have some slight advantages. For breeding bees rapidly, I prefer the standard. It is my opinion that no bees ever "spring dwindled" that could rightfully be called well-wintered.

6. I do not know whether I would or not; am quite sure I would not for comb honey; for extracted, I should prefer it, if I was sure there was no serious drawbacks connected with it. In August we procured four metal honey-boards, and put them to the best test the number and opportunity afforded. We have arrived at some mistaken conclusions in the past, and felt that we wanted more time and more of the honey-boards to satisfy us in regard to that matter.

7. Not quite, I think; as the side walls of the Given are not as high, and much softer, having less pressure, though they contain more wax, but the base being thinner is somewhat weaker. We have not been able to make practical use of full sheets of any foundation in brood frames without the use of wires.

8. For the purpose of shade, we use a board 2x3 feet over each hive. This is generally on the hives during the entire surplus season, but not always, though we use no beveled edges, and have serious objections to them, or any

other device that prevents the lateral motion in adjusting stories. We have never had the water go inside our hives.

Late Breeding, etc.

Does Mr. Heddon allow his bees to fly at all times, or close the entrance when the temperature is so low as to prevent many from getting back to the hive? Why does he object to late breeding? W. L. Gage.

Kane City, Pa., Nov. 5, 1883.

Answer.—I never imprison my bees at any season of the year, except when moving them. Healthy bees, if undisturbed, are in no danger of depleting their numbers by flying from the hives when the weather is too cool for them to return. I am not afraid of late breeding when caused by natural gathering and proper temperature, but fall stimulated-breeding in order to produce bees that can gather no honey during that season, simply to winter them, I object to, on the ground that young bees are no better, if as good, to winter healthfully than old ones, because they are more likely to eat bee-bread during confinement and become sick with dysentery. In late fall and early spring it costs a bee to rear a new one, besides cost of feed and labor. Finally, past experience and observation has taught us that bees winter no better after falls of late breeding than when they ceased early.

SELECTIONS FROM OUR LETTER BOX

Hedge Hyssop, etc.

I send by to-day's mail 2 plants for names. The 1st, No. 1, is a plant having 1 or 2 stalks from the ground up, one of which produces numerous pods, such as I send. The stalk is square and has grown this season to a heighth of 3 or 4 feet. It was planted under the impression that it was Simpson honey plant.

No. 2 is, I suppose, the true Simpson honey plant, or carpenter's square, so often described. Both grow wild, and from their appearance I should judge them to be good honey plants.

I have 10 acres sown in alsike clover, which, if mown at the proper time, will come in after white clover. The yield from the latter during the past season was immense, and of excellent quality. The drought has cut everything short since the 1st of July.
N. H. Rowland.

Keene, Ky., Nov. 17th, 1883.

[No. 1 is *Laphanthus nepetoides*, or Hedge Hyssop, a tall growing perennial plant belonging to the mint family, and a good honey-producer.

No. 2 is *Scutularia nodosa*, the scullcap or Simpson's honey plant, every where noted for its great yield of honey.—T. J. Burrill.]

The Hodgson Rack.

Allow me to say to Mr. J. C. Thom and others, that my time is so fully occupied, professionally and otherwise, that I cannot give a fuller description of the section rack I use, until I get my bees into winter quarters. The cut in the Bee Journal of Feb. 14, page 96, may give some additional information, though there are no boards marked E E E, as in description there. The "Simplicity," or Hodgson rack, is the one I have been using for 3 or 4 years past. I think a cut of the different pieces separately, with an explanation thereof, would be all that would be necessary to a correct understanding of this rack, after what was said in my last article in the Bee Journal, page 514. I believe Mr. J. C. Thom will find that when the section next the glass is ready to remove, that all the rest are ready also, almost invariably.
T. E. Turner.

Sussex, Wis., Nov. 2, 1883.

Bee Hawks.

I send three specimens of the insect genus. For the want of a better name, I, in my nomenclature, call them "bee hawks." I do so from their manner of a taking in my bees. I have watched them closely, and noted the precision and fatality of their dart for the alighting board. They will poise themselves upon a twig, near the hive, just as our blue rifle-tail hawk does, ere he makes a dart for his prey. This is the only enemy I have found in my apiary.
John A. Emison.

Mission Valley, Texas.

[This is one of the bee robber-flies, belonging to the genus *Asilus*, but it is not either of the two species more commonly observed at such depredations, neither do I know of any account of bee-killing by this species.—T. J. Burrill.

From Northern Alabama.

Almost 2 seasons have passed since I wrote to the Bee Journal, saying that bees were as rich as I ever saw them at that time. That was from tulip or whitewood, (generally called "poplar" here.) The weather turned cold, and continued so until June 10, when the warm weather set in and continued until July 4, and then we had a rainy season until September 15, and then cool weather followed again. I knew the consequences very well, during the coming winter, of "our little fellows' famine." They consumed a considerable quantity of honey during the cold and cool spell, from April 11 until June 10, being nearly 2 months. Nearly three-fourths of the bees were lost by starvation, last winter and spring. I lost about 40 per cent. of mine for the want of food in due time; I was sick in the winter, and family troubles prevented me from feeding them. I saved only 12 of them. The spring was cool until May 1, then we had a warm spell for 2 weeks, when it became cold again until June 1, when it became warm again. That was favorable for the linden, which gave a good flow of honey, which, when sealed, looks almost like cream. The bees built a good supply of honey-comb last year, and it was valuable this summer. My 12 colonies stored 360 pounds of linden honey; I could have had half as much more if the hives had been uniform in size. I sold my honey at from 10 to 12½ cents per pound. Our local demand for honey is not as good as it was 15 years ago; but I get as much now from linden as I then got from honey dew. We have not had a honey-dew flow since 1877; and but 1 from poplar and 3 flows from linden. The fall weeds bloom all through September; when this month is warm, they collect a great quantity from them. They do tolerably when the weather is warm, for the cool weather arrests the flow of honey from the plants.
John M. Ryan.

Apple Grove, Ala.

More Asters.

I send three plants on which the bees work nearly all the time they are in bloom, which is from 3 to 4 weeks. Please give the common and botanical names in the Bee Journal.

Bunker Hill, Ill. Geo. Drew.

[These are all asters, whose value as honey plants is widely recognized. They are, however, autumnal bloomers only, hence cannot afford the bee pasturage that some others do. They are seldom cultivated for this purpose, and in a wild state, only grow where they are undisturbed from year to year, as along the fence rows or in open grounds not closely pastured.

No. 1 is *Aster lævis*

No. 2 is *Aster ericoides*.

No. 3 is also an aster.
T. J. Burrill.]

Details of My yield of Honey.

I see on page 506 a request from T. J. Tiffany for a detailed report of the big yields. To answer his question in full would take too much space, but I will say that I obtained an average of 265 pounds of extracted honey from 10 colonies in 1882, and 150 pounds average from 20 colonies this season, and I am satisfied that the sequel was in feeding. I use the two-story Langstroth hive, 20 frames, for extracted honey. In 1882 I fed sugar, 2 pounds to 1 gallon of water. In 1883 I fed honey, raising a frame from the lower story, uncapping it, hanging it in the upper story, and putting on empty combs in the centre of the brood nest. If there is no honey in the lower story I uncap a comb that I have for that purpose, and hang it in the top story and turn down one corner of the blanket to let the bees pass up to it.
Wm. Malone.

Oakley, Iowa, Oct. 15, 1883.

A Curious Freak.

In the *German Bee Journal*, of Nordlingen, No. 19, volume 39, I read the incredible but true fact that a Mr. Anton Kremer, school director and bee master in Schroda, Germany, saw on July 20th, at 3 o'clock p. m., on an open space of ground, a drone which was dragged along by a worker bee. In going near to examine the pair, he found that they were closely hung together, a drone and a worker bee; that the drone was dead and had its genital organs fastened in the vagina of the worker, so that by gentle pulling they could not be separated. He placed the pair in alcohol, but the worker was strong, and it required several dippings under before it was dead; then on recommendation of the editor of that journal, Mr. Kremer personally delivered the pair to the Rev. Pastor Schonfeld, the greatest scientific and practical bee-keeper in Germany, to investigate, and he sends word to the above paper that "*the bee which hangs together with the drone is not a small queen*, but a real worker-bee."

The bees are of the common German race. The above paper will publish the result of the investigation as soon as it is accomplished. Rev. Schonfeld is in possession of a very great microscope, which the bee-keepers in Germany bought by subscription and placed in his hands.

WM. F. KANZLER.

Fulda, Ind., Nov. 3, 1883.

Good Enough.

My report is as follows: Fall of 1882, 71 colonies; lost 6 in wintering, lost 4 in spring, sold 1; balance, 60. Fall of 1883, 115; comb honey, in sections, 2,300 pounds; extracted honey, 4,200 pounds. The spring was wet and cold; clover commenced to yield honey on June 3rd, and it was of good quality. Swarming commenced June 5th, and ended July 4th. Fall crop rather light.

S. H. MOSS.

Colchester, Ill., Nov. 6th, 1883.

The Thickness of Sections.

I have just been reading on page 564 what Mr. A. J. Fisher says about the thickness of sections, and will give my experience. Several years ago I tried the wide frames, to hold 6 or 8 two-inch pound sections, with separators, but I soon found that they were too much bother and would not pay, so I have been using a "case" with a bottom in it, though I prefer a case like Mr. Heddon uses. I also wanted to use, during the past season, thinner sections, so that the combs would be built straighter. I have used 8,000 sections 4⅞x4⅞x1½. I like them very well, but find that they weigh, when filled, 18 ounces. As I prefer 1½ inches for the thickness of the sections, I would suggest that the size be 4½x4½x1½ for those who can use them on their hives; those who use Langstroth hives are all right, with the Heddon case of 7 sections to the foot, 4¼x4¼x1¾, scant. If 1½ inches is the proper thickness, the sections might be made 4¼x5x1½; the Heddon case would then hold 32 one-pound sections, or the 8-frame Langstroth hive. I find that foundation that is made thin enough will sag and warp, so I use guides 1½ inches by the full width of the sections. I do not consider the Given foundation thin enough to use full sheets in the sections; it will not be as thin and nice as natural comb. I fear it will by-and-by be worth less in the market, if people know it.

R. S. BECKTELL.

Three Oaks, Mich.

Gone to Florida.

I came to Florida via sailing vessel from New York to this place, thence to Palalka, Astor, Ft. Mason, Eutis, Tavares, in Orange Co. Built a sail-boat, came the entire length of the Ocklawaha river to the mouth of the St. John's, and then back to this place. I secured 80 acres in Marion Co., near Orange Spring, the only place in the interior that I found honey plentiful and bees common and cheap, with palmetto and other honey-producing plants in abundance. Having traveled by water about 400 miles, from the head of Lake Dora to the ocean, camping out during the entire journey, I have suffered less from the heat and insects than at the north, with good health since my arrival.

JNO. Y. DETWILER.

Jacksonville, Fla., Nov. 5, 1883.

My Report for 1883.

As I could not be present at the late Northwestern Bee-Keepers' Convention, and add my report to the others, I will do so now. I commenced the honey season with 80 colonies, but few of them being in an average condition. I had about 3 weeks good flow from white clover, none whatever from basswood, and less than a week's good yield from buckwheat and fall flowers. The season, on the whole, was less than an average. I now have 155 colonies in winter quarters; I have taken 9,800 pounds of honey, mostly extracted; about 3,000 pounds of it being on hand. In addition to the above, I have about 300 pounds stored away in frames for feeding next spring, if needed. My honey has nearly all been disposed of at wholesale, bringing from 7¾ to 12 cents per pound, net; averaging fully 10 cents net. As I have been to no expense for new hives or other supplies, it leaves nearly all my income as profit. This makes a fair show for the poorest season I have had in 4 years.

O. O. POPPLETON.

Williamstown, Iowa, Nov. 2, 1883.

Large Oaks from Little Acorns.

I was much pleased to notice in the BEE JOURNAL of Nov. 7th, the item concerning the good work Dr. B. F. Hamilton, of Terre Haute, Henderson Co., Ill., had done for the JOURNAL. About one year and a half ago I had business in the village of Terre Haute, and met, for the first time, Dr. Hamilton. At that time I discovered that the doctor had an attack of "bee fever," and for a favor which he did me, I proposed to send him the BEE JOURNAL, free, for 5 or 6 months. My proposition was cordially accepted, and the JOURNAL was sent on its mission of love and usefulness. Shortly after I ordered the JOURNAL sent to the doctor, he wrote me telling me how much pleasure he experienced in perusing its well-filled columns, and I felt certain that the doctor was enlisted for life in the good cause. I am happy to learn of Dr. Hamilton's success in securing subscribers to the old reliable, and can only say to others, "go and do likewise." There is my ☞, doctor, for a fraternal shake, with the hope that one of the happiest hours of your life was when you became a subscriber to the BEE JOURNAL.

J. R. BAKER.

Warsaw, Indiana.

Bees in Good Condition for Winter.

I am preparing my bees for winter. I have 31 colonies and the most of them are in good condition. This has been a very bad season for honey; I got plenty of increase, but only about 200 pounds of honey.

WM. ASHCOM.

Ligonier, Pa., Nov. 6, 1883.

The Michigan Convention.

DEAR MR. EDITOR:—May I ask you to call special attention to our next annual meeting to be held in Flint, Dec. 5 and 6, of the Michigan Bee-Keepers' Association. We expect to have by far the best meeting ever held in the State. It is expected that the Rev. L. L. Langstroth will be present. To see and hear him will pay any one for the trouble and expense incident to the journey. We also expect D. A. Jones, A. I. Root, C. F. Muth, and hope to have C. C. Miller and T. G. Newman. From what I hear, Michigan bee-keepers are to be out in force. Hotel rates are to be $1.00 a day. Further particulars as to programme, will be given soon. We expect to get reduced rates on the railroads. To aid in this, and that I may know how many certificates on railroads to ask for, will every one in this or other States who expect to come, drop me a card at once to that effect?

A. J. COOK, *President.*

Lansing, Mich., Oct. 15, 1883.

P. S.—I got the date of the above Convention wrong, in a previous notice. The date should be Dec. 5 and 6.

A. J. COOK.

It certainly seems reasonable that a specialist who gives his constant attention to chronic diseases, should acquire a valuable experience and a proficiency which should make his opinion of especial value. Therefore, those who have long suffered from ill health, or merely felt themselves "out of sorts," and have failed to get relief from advice of home physicians, should take advantage of the liberal offer of free consultation and advice made by Dr. E. B. Foote, of 120 Lexington Ave., N. Y. City. A practice of over thirty years, enables him to discover at once the nature of obscure affections, and to offer suggestions for cure or relief which are sure to be plain and direct to the point.—*Adv.*

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

How to Create a Market for Honey.

We have now published another edition of the pamphlet on "Honey as Food and Medicine," with more *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy **5** cents, postpaid; per dozen, **40** cents; per hundred, **$2.50**. **500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit. Try it, and you will be surprised.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a statement of account every week.

Our New List of Premiums.

Getting up Clubs for 1884.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

For a club of $20,—10 Weekly, or its equivalent, we will present, besides the 15 per cent, a tested Italian queen.

Announcements for larger clubs will be made hereafter.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

Trial Trip, until Dec. 31.—25 cents.

Wishing to be able to reach several thousands of the old-fashioned bee-men, and by the aid of the BEE JOURNAL to lift them up to higher ground, adopting newer methods and progressive ideas, we make the following very liberal offer: We will send the Weekly BEE JOURNAL till Dec. 31, *on trial, for 25 cents.* In order to pay for getting up Clubs, we will give a copy of Fisher's Grain Tables, or Scribner's Lumber and Log Book, to any one who will send us five trial subscriptions (with $1.25); for a club of *ten* we will give a cloth copy of Bees and Honey; for a club of 15, a cloth copy of the 7th edition of Cook's Manual of the Apiary; for a club of 25, we will present both the Manual and Bees and Honey. If any one wants these Books for nothing, here is on excellent opportunity to get them for a little exertion.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for ten cents.

☞ The new two cent rate of postage for letters went into effect on October 1. Three cent postage stamps will now be but little used. For all fractions of a dollar sent to us hereafter we should prefer either *one-cent*, or else five or ten-cent postage stamps, or a Postal Note. Do not send coins in any letter.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey instructions on the exhibition of bees and honey at Fairs, etc. This is new 10 cent pamphlet, of 32 pages.

Honey and Beeswax Market.

Office of American Bee Journal,
Monday, 10 a. m., Nov. 12, 1883.

The following are the latest quotations for honey and beeswax received up to this hour :

CINCINNATI.

HONEY—The demand for comb honey is fair with a fair supply. Offerings of extracted honey are plentiful, and there is a large supply on the market. The demend is slower than last season, but appears to be improving gradually. Choice comb honey brings 12@15c., and extracted 7@9c. on arrival.

BEESWAX—Is of ready sale at 28@30 on arrival.

CHAS. F. MUTH.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 17@21c. Dark and second quality, 14@15c.; extracted white clover in kegs and barrels, 9@10c.; dark, 8c.

BEESWAX—Prime yellow, 27@29c.

H. K. & F. B. THURBER & Co.

CHICAGO.

HONEY—The demand for honey is good. Choice 1 lb. sections of white comb, well filled, brings 18@20c.; 1½ to 2 lb. sections, 16@18c. No demand for dark comb honey. Extracted honey is bringing 8@10c. per pound, according to body, color and flavor.

BEESWAX—Prime yellow, 33c.; medium, 28@30.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—Market is well stocked with ordinary qualities. Inquiry for the same is not active. For fancy comb it is an easy matter to secure custom. White to extra white comb, 16@18c.; dark to good, 12@14c.; extracted, choice to extra white, 7½@8½; dark and candied, 6½@7c.

BEESWAX—Wholesale, 27@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Choice in better demand, but unchanged. Sales chiefly in a small way. We quote strained and extracted at 6¼@7c. Comb at 14@16.

BEESWAX—Readily salable at 26@27 for choice.

W. T. ANDERSON & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—Choice honey is in excellent demand now. Every lot received thus far in good order, has been sold on arrival; best 1 lb. sections bringing 18c. quickly, occasionally 19c.; 2 lb., 17c, with an occasional sale at 18. Second quality and broken lots are very hard to sell. Extracted honey not in demand.

BEESWAX—28c.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—We quote extracted honey at 10@11c., with a good demand. We have sold easily four times as much extracted as we ever did before.

BEESWAX—We have none to quote.

BLAKE & RIPLEY, 57 Chatham Street.

KANSAS CITY, MO.

HONEY—The demand for comb honey is still largely in excess of receipts, and prices fully sustained. Choice 1 and 2 lb. sections, 17@18c. Some extra fine lots have brought 19@20c. On extracted honey the market is well supplied, sales ranging from 7@9c., according to quality and condition.

JEROME TWICHELL, 536 Delaware Street.

◆

☞ It would be a great convenience to us, if those sending us Postal Notes or Money Orders, would get the issuing Post-master to make them payable at the "Madison Street Station, Chicago, Ill.," instead of simply "Chicago." If they are drawn on Chicago, they go to the general office, and we have to make a trip of six miles to get them cashed; when if they are drawn on the Sation as above, it is only a few steps from our office. When sending us money, if you will please remember this, you will much oblige the publisher.

Emerson Binders—made especially for the Bee Journal, are lettered in gold on the back, and make a very convenient way of preserving the Bee Journal as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

◆

☞ We need the numbers of the Bee Journal for August, 1866, and April, 1876. Any one having them to spare, are requested to send us a Postal Card. We will give 25 cents for each. Do not send them without writing, for we want only *one* of each; and, if we are not already supplied, we will take them.

◆

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

◆

☞ When in *earnest* it is quite surprising what a man can do. Dr. B. F. Hamilton, a well-known physician and surgeon of Henderson County, Illinois, has sent us 27 *new* subscribers. If all those who have a little leisure would do as much in proportion to the busy Doctor, what a "boom" we should have! The Doctor has received as *premiums* quite a number of excellent bee books. Those who want to add to their libraries, will now be able to do it, for a few hours work in getting subscribers for the Bee Journal. Who will try ?

Later.—Mr. D. G. Parker, one of the wide-awake bee men of Missouri, has sent us 39 *new* subscribers. They are rolling in at about a hundred a day. All those who are thus devoting a little time to the matter, have our thanks as well as the premiums. See a new List of Premiums on another page.

Vandervort Comb Fdn. Mills,
Send for Samples & Reduced Price-List.
32ABtf J. VANDERVORT, Lacyville, Pa.

Sweet Clover
AND OTHER SEEDS.

Having a LARGE stock of SWEET CLOVER **SEED**, I can fill orders at **25c.** per pound **$3.25** per peck, or **$12** per bushel.

Also, all other SEEDS for HONEY PLANTS,

ALFRED H. NEWMAN,
923 West Madison Street, Chicago, Ill.

APIARY FOR SALE.

Everything complete; 55 Colonies in Langstroth hives, well stored with honey, also new hives, sections, frames, foundation, extractor, smoker, etc. Good location; abundant home market for honey from 500 colonies. Siatica compells me to sell.

Address, **A. H. HOLCOMB.**
46A4t Bit WINNEBAGO, ILL.

FOR
BEES, QUEENS
AND ALL
APIARIAN IMPLEMENTS,
SEND FOR CIRCULAR TO
FLANAGAN & ILLINSKI,
Lock Box 995, BELLEVILLE, St. Clair Co. ILL.
1ABly

SAMPLE SECTION RACKS.—In answer to many inquiries, I will furnish samples of the section rack I use for 75c. T. E. TURNER, Sussex, Wis.

FOR SALE.—200 colonies of BEES in one and two-story 20-frame Langstroth hives.
O. M. BLANTON and G. C. VAUGHT,
46A3t GREENVILLE, MISS.

BEESWAX
WANTED!

HIGHEST Market Price Paid.

Please state Quality and Quantity.

JAMES HEDDON,
DOWAGIAC, MICH.

One Dollar per Copy.

The first and second editions of the HANDY BOOK comprised 2,000 copies. We have a few books left which we will mail to any address, if called for soon, for $1.00 per copy. The Book contains 216 pages—is printed in clear, large type on best paper, and is neatly bound in cloth. We have not put the book in the hands of dealers, as we chose to sell it to our customers with other goods, which we sell at prices very near the cost to manufacture them. To those who paid $1.25 for the book, we will, on receipt of 30c. in stamps, mail one of Locke's Perfection Bee-Feeders. Handy Book and Feeder, by mail, $1.50. Send the money at my risk. Do not pay 10c. to register it. Prospectus and special circulars describing three new and useful articles for the apiary, sent to any address. Make Postal Notes and Money Orders payable on Salem, Mass., P. O.

HENRY ALLEY,
44D2t **WENHAM, MASS.**

A NEW HIVE

Arranged for continuous passage ways and continuous combs, so that greater ease and rapidity in the handling of sections is gained, also a larger production of comb honey. Although patented, a legal right to make and use will be accorded to any one purchasing a sample hive, the right only to manufacture to sell or convey to others being with-held. A stand, alighting board, entrance blocks, two division boards, ten brood frames, 32 1 lb. sections and the improved section fixtures, all packed in the hive. Price of first hive, including the above parts and a special circular on the mode of management, $7.00. A fine Photo sent for 8 two-cent stamps. Orders filled in turn.

Reference : Exchange Bank, New Philadelphia.

Address, **DR. G. L. TINKER,**
44Atf NEW PHILADELPHIA, O.

Honey! Honey!! Fruit!!!

Twenty nice black Tartarian CHERRY TREES, by express, for $1.00. These are 3 feet—over and under; can send 20 small ones by mail, post-paid, for $1.00. **CHAS. KINGSLEY,**
45A2t GREENEVILLE, Greene Co., TENN.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XIX. CHICAGO, ILL., NOVEMBER 21, 1883. No. 47.

OLDEST BEE PAPER IN AMERICA
THE AMERICAN BEE JOURNAL
ESTABLISHED IN 1861

Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR,

☞ From a recent letter, we learn that Mr. Frank Benton, late of the Michigan Agricultural College, but now residing at Munich, Germany, intends to make another journey to Cyprus, Syria, etc., for the purpose of obtaining pure bees from those countries, for breeding purposes. He leaves Munich in January next, and intends to return there in April, 1884.

☞ We have received one of Mr. T. J. Cook's new bee brushes, intended for brushing the bees off the combs, which we have placed in our museum. A letter just received from Mrs. Cook states that Mr. Cook died on Monday, Nov. 5, 1883, but giving no particulars. The BEE JOURNAL condoles with the bereaved in their affliction.

☞ The Florida *Enterprise* thinks that the happiest set of men in the vicinity of New Smyrna are apiarists, and says: "Olaf Oleson has extracted over 40 barrels of choice honey, and was compelled to stop for want of barrels, and is now gathering it in neat one-pound sections. R. S. Sheldon comes next, while his neighbor, Dr. Goodwin, has been busy building up his apiary for the coming season. Messrs. Rowly, Hart, Brown, Lewis, and others have no reason to complain."

☞ "Trichinæ; their microscopy, development, death, and the diagnosis and treatment of Trichinosis," by W. C. W. Glazier, M. D., assistant surgeon, Marine Hospital Service. This is the title of a pamphlet published by the Illustrated Medical Journal Co., a copy of which is on our desk.

Mr. King's Visit to Cuba.

The "*Bee and Poultry Magazine*" for November makes the announcement that Mr. A. J. King, its editor, has gone to Cuba for his health, and to establish an apiary in the Island of Cuba. The following is an editorial on the subject in that paper:

The steamer which carried Mr. King southward, also carried on board 100 full colonies of Italian bees, and all the paraphernalia of an apiary. There was also on board the able apiarist—Mr. Osburn—who is to take charge of them on Cubian soil, and manage the apiary for Mr. Casanova, who believes firmly that it is a paying thing to keep bees, and we agree with him.

Mr. King is going to set out the grounds for the apiary, and see that every thing is working as it should, before he leaves the sunny land. He will be gone two months or more, and will return by way of the Southern States, visiting some of the principal apiaries below the Dixie line.

The following is a letter from Mr. King, since his arrival, and will be interesting to our readers:

SAN MIGNEL, Oct. 23, 1883.

After quite a rough-and-tumble journey, fraught with much inconvenience and full of incidents, which I choose to relate at some future time; we are here 20 miles southeast of Havanna, with the bees, all of which came safely with the loss of 4 colonies, and these were lost since leaving Havana.

This is truly a wonderful country, and one which, to all appearances, seems to enjoy one continuous honey flow. The number of flowering trees, shrubs and plants are simply overwhelming, and far beyond my powers of classification. The soil is wonderfully fertile, and produces abundantly from year to year without manure. The face of the country is diversified with hill and dell, and running streams of pure spring water are plentiful. The climate is lovely; no fogs, no frost—but one everlasting spring. Flowers are continuous. The palm, orange, banana, lemon and many other fruit trees producing largely of both honey and pollen. Fruits in all the different stages of development, from the flower to the ripe fruit, are continuous throughout the year.

The inhabitants are, as a rule, rather indolent; as nature produces, unaided, all they need for eating and wearing apparel. Rains of short duration are frequent, so that everything looks fresh and inviting at all times. Of course there are disadvantages which I will relate in future letters, when I shall have had time to write up the "ins and outs" of cuban bee-keeping.

A. J. KING.

☞ Frank Leslie's Illustrated Weekly gave a full page engraving, on Aug. 25, of a Bee Farm in Brookfield, Conn. This shows that the "sweet pursuit" is rapidly coming into notice.

COUNT ROBERT OF PARIS.—T. B. Peterson & Brothers, Philadelphia, publish this day, "COUNT ROBERT OF PARIS," being the *Fifth Volume* of their new and cheap edition of "The Waverly Novels," by Sir Walter Scott.

☞ The *Bee-Keepers' Magazine* is after the first of next January to be the title, and $1 the price of the *Magazine*, published by King & Aspinwall, in New York. The Poultry part is then to be dropped.

☞ The *Kansas Bee-Keeper* is on the first of January to be raised in price to $1 a year.

Shipping Receipts.—Mr. J. O. Todd, of Richmond, Iowa, asks as follows: "When you ship honey, or any freight on the railroad, and the agent gives you a receipt that they have received your goods, do you hold the receipt or send it to the party you shipped the goods to? Answer through the Weekly BEE JOURNAL." Of course it should be sent to the consignee, so that he can obtain the honey of the railroad company. Some Railroad companies will not deliver goods until the receipts are produced.

☞ We need the numbers of the BEE JOURNAL for August, 1866, and April, 1876. Any one having them to spare, are requested to send us a Postal Card. We will give 25 cents for each. Do not send them without writing, for we want only *one* of each; and, if we are not already supplied, we will take them.

Honey as a Medicine.— Recipes.

The following recipes, in which honey is one of the principal ingredients, are translated from a recent number of the *Bienenvater ausBohmen*, by Mr. A. R. Kohnke:

CONSTIPATION.—Honey, especially the solid parts of the granulated, eaten on bread, instead of butter, will have the desired effect. That part of honey which does not granulate, possesses this property in a much less degree.

A sauce made of prunes, boiled and sweetened with honey, is an excellent remedy.

In dangerous cases apply an injective of milk and honey, having the temperature of the blood, about 97° or 98° Fahr.

SUPPRESSED PERSPIRATION. (Taking cold.—Barley soup sweetened with honey, drank before retiring; or oatmeal soup with honey, drank warm.

ASTHMA.—Grated horse radish mixed with honey; one tablespoonfull taken before going to bed.

CONSUMPTION.—Physical exercise, especially horseback riding before breakfast; the body to be rubbed thoroughly with a woolen cloth, night and morning; bedroom, an upper story, with a window partly open day and night; retiring and rising early; main diet to consist of farinaceous food and vegetables; for drinking, nothing but milk and honey, mixed half and half, either warm or cold.

CROUP AND HOARSENESS.—A gargle made of sage tea, sweetened with honey, or pills made of mustard flour and honey.

WHOOPING COUGH.—A decoction of wheat bran mixed with milk and honey, drank frequently, gives relief.

WORMS.—Before breakfast take a tablespoonfull of honey, or a tea made of peppermint sweetened with ⅓ to ½ its bulk of honey.

TO REMOVE FISH BONES and similar hard objects which have become lodged in the throat.—Make a large pill of wax, (as large as can possibly be swallowed,) dip in honey and let the patient swallow it.

TO CURE A BURN OR SCALD.—Cover the the same instantly with honey, keeping it so until the pain ceases.

☞ From the *Bienenvater aus Boehmen* we learn that at the census taken in 1880 in the Empire of Austria (exclusive of Hungary), it was found that 926,312 colonies of bees were kept, which produced 38,412 metric hundred weights of honey and wax (about 7,682,400 lbs.) representing a value of 2,134,272 florins, or about $1,067,136. There are 18 large apicultural societies, with a membership of 7,100—and 11 bee-papers are published. The exports exceeds the imports by 4,300 metric hundred weights of honey, and 800 metric hundred weights of wax.

Preventing Honey from Granulation.

Prof. J. W. Colcord, of the American Pharmaceutical Association, gives the following on the above subject, in the *Scientific American* :

Having for several years had considerable trouble and loss in keeping pure extracted honey, on account of its tendency, in a short time (particularly in warm weather), to crystalize, I have been ready for any remedy that was feasible. One lot that I purchased in the comb and strained myself, soon became almost worthless from this cause. Some two months ago I had a small lot that I found crystallized when wanted for use, although I had taken the precaution to cork tightly and put in a cool place in the cellar. It occurred to me to see what would be the result from melting and adding a small amount of glycerine. Placing the bottle in a water bath, I soon had it melted, and added one ounce of glycerine to about 1½ pounds of the honey, setting it aside to cool. It has shown no sign of re-crystallization as yet, and I am just using the last of it. I can see no objection to this on the score of adulteration, or any harm from its use. In making simple syrup, I have occasionally found it crystallized in the bottom of the bottle, causing some trouble to remove, and several times have found some chemical change, which has caused an unpleasant odor, which I have not at all times been able to obviate, although using distilled water and the purest sugar obtainable. I have not, as yet, had an opportunity of trying the effect of glycerine, but think it might prove beneficial, and in no way objectionable. I have been accustomed to add a small amount to my beef, iron and wine for a long time, and find it prevents scouring, and, in a large measure, percipitation.

The Michigan Convention.

DEAR MR. EDITOR :—May I ask you to call special attention to our next annual meeting to be held in Flint, Dec. 5 and 6, of the Michigan Bee-Keepers' Association. We expect to have by far the best meeting ever held in the State. It is expected that the Rev. L. L. Langstroth will be present. To see and hear him will pay any one for the trouble and expense incident to the journey. We also expect D. A. Jones, A. I. Root, C. F. Muth, and hope to have C. C. Miller and T. G. Newman. From what I hear, Michigan bee-keepers are to be out in force. Hotel rates are to be $1.00 a day. Further particulars as to programme, will be given soon. We expect to get reduced rates on the railroads. To aid in this, and that I may know how many certificates on railroads to ask for, will every one in this or other States who expect to come, drop me a card at once to that effect ?

A. J. COOK, *President.*

Lansing, Mich., Oct. 15, 1883.

We are sorry to say that we shall be unable to attend.—ED.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., Nov. 19, 1883.

The following are the latest quotations for honey and beeswax received up to this hour :

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BEESWAX—Is of ready sale at 28@30 on arrival.

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CORRESPONDENCE

For the American Bee Journal.

How Far Apart Should Bees be Kept to Insure Purity?

G. M. DOOLITTLE.

If any of us have a particular strain of bees we wish to perpetuate, the question will naturally arise, How far must I keep them from other bees, so as to insure that the queens of the desired strain shall not mate with the drones of another kind of bees, thus despoiling all our plans?

That such thoughts are in the minds of the apiarist, is proven by the question often being asked, "How far will a queen go from her hive to find a mate," and other questions of similar import. Replying to such a question as the above, I find this answer given by one who should be authority. "Queens are supposed to go a distance of 1½ to 2 miles if necessary;" but as he says, "are supposed," it is taken for granted that the supposition is based more upon what others think, rather than upon any definite conclusion arrived at by the writer. In this case, however, there is nothing said as to how far the drones may fly, and if we allow the drones to fly as far as the queens, a distance of from 3 to 4 miles would be the distance bees must be kept apart to insure purity.

Another writer who is considered authority on the subject of queen-rearing, makes his views very plain by saying, "There are some who entertain the idea that a race of bees cannot be kept pure unless they are kept isolated several miles from all other races. I have tested this matter carefully and pretty thoroughly during the last 20 years, and have found that one-half mile is as good as a much greater distance.

He then goes on to state the length of time the queen is gone from her hive on her wedding trip, from which I supposed he arrived at the above conclusion. He gives this time as five minutes, from which I conclude that it is supposed that a queen cannot fly over one mile in that time (½ mile and return), but as will be seen, nothing is said of how far the drone may be able to fly during that five minutes.

Regarding the flight of drones, he says the "drones will sometimes fly a mile or more, but the queens will not," but about how long it takes the drones to fly that mile, nothing is said. But what is to hinder those drones from being that mile from home when the queen gets at the end of her one-half mile. As I see nothing to prevent, it looks as if the author would have to admit that he drew his conclusions blindly, and that he has also left a very weak point in his argument.

Now let us look at some facts, which are always stronger than theories, or anything based upon supposition. Some 20 years ago my father planted a piece of corn on the top of a high hill, and as the season was quite wet during June and the forepart of July, the weeds were quite rank in the corn during the forepart of August. As soon as through haying, we went into this corn-field to cut the weeds. Every afternoon from about half-past twelve to three o'clock it would sound as if there was a swarm of bees in the air, and at first we looked often to see if we could not see a swarm, but as none was discovered, we concluded it must be flies of some kind, which congregated there to play. At this time there were no bees nearer than two miles from this hill, unless, perchance, a stray swarm might have been in a piece of woodland not as far off. Previous to this my father had kept bees, and had often pointed out the queen to me as a swarm was going into the hive when he hived them, and I knew a drone as well as a worker bee.

One day I was sent to the corn-field alone, and as it was a very warm day, along about two o'clock, I got extremely tired (or, perhaps, lazy), and so I lied down partially in the shade of the corn to rest. As I remained there, listening to the hum of the flies, as I supposed, I thought I would try to ascertain if I could see anything; so, shading my eyes by placing one hand each side of them, and looking steadily up into the clear sky; after a little I could see thousands of living creatures circling in all directions, so swift that at times they looked like a streak of black, shooting across the sky. As I was looking at them, I saw a dozen of these shooting objects give chase after another, and soon overtook it, when their flight was less rapid. Circling around, they came near the ground and stopped on the tassel of a stalk of corn, which stood about a rod from where I lay. I got up at once and proceeded to the stalk of corn, but before I was half way to it, one flew off, which looked to me like a queen honey bee, and the other fell to the ground. Upon picking it up, I found it to be a dead drone. Although at that time I knew little of bee lore, still I had solved the mystery of the humming noise, no longer believing it to be flies which made the noise, but knowing it to be made by the drones of the honey bee.

I now believe that this was a place where the drones and queens congregated, but the facts only show that drones are numerous which fly two miles from home, and from the next fact which I give, I believe that there were drones there from hives five or more miles away.

When I first kept bees there were no Italians nearer than five miles distant, yet occasionally I found that some of young queens would produce "now and then" a yellow bee. My bees were all black when I bought them, and the Italians were introduced five miles away, after I had bought the blacks. The next season a man four miles distant Italianized his whole apiary, and the year following I found nearly one-third of my young queens producing from one-twelfth to one-third of their bees with yellow bands. Being pleased with the work done by these hybrid bees, I introduced the Italians into my apiary the next year, which, of course, put a stop to my observations, as to the distance queens will mate.

From the above facts I am positive that queens of one race will mate with the drones of other races of bees, unless such are kept more than five miles apart.

Nature has so ordered things that the best results possible to be secured are accomplished by the instinct which she prompts, and thus the queens from one apiary are fertilized by drones of a distant apiary, which secures a cross that prevents in-and-in breeding, and gives us a race of bees capable of doing the best of work. That it would be more to the queen-breeders' interests if it were otherwise, I am well aware; but for the honey-producer and for the perpetuation of a hardy race of bees, the Creator has ordered things aright, in this as well as other matters.

Borodino, N. Y.

For the American Bee Journal.

Iowa Central Convention.

The Iowa Central Bee-Keepers' Association met at Winterset, Iowa, on Nov. 2, at 10.30 a. m. There being but few of the members in yet—adjourned to 1 p. m., when the Convention was called to order by the President, A. J. Adkison.

The minutes of the last meeting were read and approved. The roll of members was called, and a fair number responded to their names.

The Secretary's and Treasurer's reports were read and approved.

Then came the President's address on Inprovements in Bee-Culture; and then the enrollment of members was made, which now numbers 28.

The election of officers resulted in the re-election of all, viz: A. J. Adkinson, President; J. W. Graham, Vice-President; J. E. Pryor, Secretary, and Mrs. Mary Pryor, Treasurer.

The reports of the different members were given. Although there was not reported as large a honey yield as last year, the bee-keepers of Central Iowa have nothing to discourage them. From 327 colonies, spring count, there was an increase of 148, and these colonies produced 8,115 lbs. of extracted, 1,551 lbs. of comb honey, and 92 lbs. of beeswax.

The plan of wintering was discussed to some extent.

Mr. Thos. Chantry, of Casey, Iowa, being present, was called on to give his plan of wintering in clamps, which was very interesting to all present. He has had very good success so far, wintering on this plan.

Motion was made that our next meeting all bring their dinner baskets, well-filled, and have a general good time, socially.

Adjourned to meet at the Court House in Winterset, on Friday, April 18, 1884.

J. E. PRYOR, *Sec.*

For the American Bee Journal.

Pollen Theory, Bees in Winter, etc.

JAMES HEDDON.

In reply to Mr. Pond, on page 560, I will say that I never meant to claim, when using the word "strain," that I had a "fixed" race or strain of bees. I do not think I have, and I will say here to all, that I am constantly fixing and trying to improve my stock, and always expect to be doing so, whether I use German blood with my dark Italians, or the latter alone. For the production of extracted honey, the dark Italians are good enough, and, all in all, perhaps are excelled by none, but in the production of comb honey I cannot think of parting with a mixture of the German blood. There is no need whatever of bringing in any ill-temper by any such mixture, if properly directed. I fully appreciate Mr. Pond's honest earnestness. I have been right there myself.

I can see no propriety in carrying the pollen discussion any farther. I am, at present, preparing such tests as will satisfy me perfectly in regard to the correctness or incorrectness of the theory, and trust that my simple reports, next May or June, will be all the reader will care to hear from me further upon the subject. Every one can experiment for themselves.

Dr. Tinker opened an attack upon this theory. I see nothing new in his last article worthy of much argument and space. As I am entitled to the last word, I claim the right to correct his mis-statements, etc. Regarding my replies in "What and How," I confine my tone of answers more to what I know than any theory, belief, or hypothesis of mine which I may argue strenuously in favor of, for the sake of getting at the facts underlying our winter disasters, while most bee-keepers are still spending their time telling how many laths they lay over the frames, and which way they are laid, etc., etc. Should the pollen theory prove the correct one, I presume the Doctor will be sorry he has found out the truth, simply because it was not *his* theory.

I have never fed glucose to bees, but if I am rightly informed regarding the results realized by those who have, it has had no influence toward killing bees by any poisonous action, but has produced dysentery, and according to my theory, glucose ranks as much below honey as honey does below sugar syrup, in point of its greater proportion of nitrogen or vegetable substance compared with its oxygen or heat-producing powers.

Regarding packing inside or outside of hives, I have tried both,several times. Neither one prevents dysentery, but the heavier out-side packing giving much better protection, has that much more tendency to prevent and alleviate the disease, and saves lugging about such useless loads all summer.

Yes, I have said for years that I believed that I could winter any one colony of bees with as much certainty as my cow, but cost and trouble being greater than the risk, I have preferred trying to find out the true cause of dysentery, and then is the time to devise cheap and practical methods of wintering bees successfully with certainty.

I have read, re-read and studied Mr. Corneil's last effort, and think that he deserves the greatest credit for that article. I am of the opinion that he is wrong, and that I am right, and I am further of the opinion that if I am wrong, he is certainly right. I greatly rejoice in feeling that at last we are coming to knowledge of some value. After first admitting that by observation and reading, we are conversant with many facts that seem to coincide with Mr. Corneil's theory, yet I wish to append a few that look rather dark.

Now, first, regarding Mr. Balch's bees, I think he will agree with me that this dampness had been with them for weeks, and that they showed no signs of disease whatever, and from what we know of getting bees out "just in time to save them," we would say these bees could have staid in another month with, perhaps, no signs of disease whatever. I think Mr. Corneil makes a weak point when he ignores our ability to tell the difference between extremely damp and dry cellars "without instruments." Knowing the extreme dampness of Mr Balch's cellar containing the perfectly healthy bees, I will venture to say, without knowing, that the 149 colonies dying out of 150 were better ventilated than the healthy bees above referred to. We are simply after facts, and through them success. Mr. Balch, will you not let us hear from you upon the subject.

If I am mistaken in regard to the humidity during our warm winters, here is something I am not mistaken about. While bees are dying by whole apiaries in this and other sections of the country, there were dotted here and there individual colonies and whole apiaries that wintered perfectly, showing no signs of disease, without any upward or excessive lower ventilation whatever. Does the "signal service records" show that humidity thus runs in streaks through apiaries and districts? The quality of and bad position in which pollen may be placed in hives, does vary in districts and apiaries.

Mr. Corneil says, "that humidity, cold and confinement, as factors in wintering bees, are based on facts in physical science ascertained and established long before he and I appeared on the scene." If he means these are main causes, which he must, does it not seem strange that we have not yet learned to winter our bees? Pollen as a factor in producing dysentery, was not ascertained and established before Mr. Corneil and I appeared upon the scene, neither is it yet, but I propose to agitate it till I find out whether it is a factor or not, and if it is, establish it; if not, drop it at once and continue the search farther.

Regarding the moisture passing from bees by transpiration and exhalation, perhaps Mr. Corneil has justly corrected me. I took my cue from the writings of professed scientists, or, perhaps, I may say older writers upon the subject. However, this point does not alter the correctness of either theory, as far as I can discover.

When I said that bees "would not eat pollen when in normal condition," I meant that their instincts would guide them to the proper food for the season, provided they were not environed by opposing influences. To illustrate one such influence: Bees will eat the honey from over and among bee-bread, and leave the nitrogenous tissue-making food and pass on to the more heat-producing food, honey, if too much influence be not brought to bear against such removal. But let cold, intense and steady, surround the cluster, thus making such removal painful or impossible, then, when hunger begins to gnaw, a lesser instinct gives way to a greater one, and bee bread is eaten. This consumption takes into the system matter that rapidly loads the intestines. A strong instinct not to void in-doors, causes the bees to hold this feces until the return of warmth will permit them to go out, and if it does not come disease ensues.

I believe that honey contains vegetable matter in such shape that if cold forces consumption of greater quantities, and confinement prevents frequent voiding that dysentery may result from its consumption alone. Honey differs in that respect, and glucose, no doubt, is worse than any honey. Humidity plays the part of conducting heat, and thus assists the cold (so to speak) in intensifying its effects.

The carbonic acid gas question, I know but little about, but I have known bees to winter so perfectly crowded into little, poorly ventilated apartments that I am of the opinion that that question is our "gnat," and that the "camel" is something else entirely foreign to it. Does it not seem strange that Mr. Corneil should demand immediate experimental proof that the pollen theory is correct, when his theory, that is older than he or I, should have been as yet of no practical value to bee-keepers generally?

We now come to the case of the 10 colonies dying while the 32 left behind all lived. If my pollen theory is correct, the agitation of moving these bees just at that time started them to breeding, which, according to my observation, would be productive of dysentery, because it would rear a lot of young bees late in the season, which would be more inclined to consume pollen, and repeat the fatal mistake of breeding out of season, and would also consume stores that ought not to be consumed. But some one says, "I moved my bees in the fall, and they wintered well." Moving bees does not always stimulate them to breeding, but in some cases it does.

In regard to the excessive dampness found in colonies having died of dysentery, it will be found, upon close examination, together with more extended observation, that the wet, moldy condition is the *effect* of the death, and not the cause.

The excessive death rate which occurred in my dry, well-ventilated and capacious cellar, as before narrated, occurred alike with bees that had and had not upward ventilation. The atmosphere in this cellar, however, was so dry that no wet or moldy combs were found in any of the hives, not even those with the least ventilation. Several hives of bees were tried upon the plan of no upward, but excessive lower ventilation; every one of those died; the only one that came through in perfect, or even good condition, of the three survivors out of 49, was one summered at a distance, and brought into the cellar in mid-winter. This colony sat on a large box with three others, in the same kind of hive, with precisely the same kind of ventilation; and while the other three died with dysentery in its worst form, weeks before spring arrived, this colony came out in perfect condition, with about one-half dozen bees dead on the bottom board. I cannot yet see how the humidity theory can cover this case, and many others well-known to the readers and myself.

Have our readers not noticed that dysentery and breeding are very apt to keep company with each other? Does humidity, cold and confinement, "producing dysentery" and "moldy combs," induce bees to breed in winter? Is it not reasonable to suppose that the handling and consumption of pollen might induce breeeding, or that a disposition to breed, necesitating the manipulation of pollen, would be productive of dysentery?

Mr. Corneil slurs my use of the term "guess." Is it not as modest to use that term as to assert that his theory of the production of dysentery is old and well established, and yet we all lose our bees with that disease whenever it rages in our locality? Should he, or both of us, turn out to be mistaken, would it not be as well if he had used the same expression?

Mr. Corneil's request to put the bees on combs of sugar, came too late, and after my bees were all prepared for winter, but, fortunately, I have over 40 colonies prepared just in that way, and if one of them have the dysentery that will end the matter with me, and I will cheerfully join Mr. Corneil in doing all I can to find the disease ambushed on the road he is following.

Last winter, with some 25 out of 50 hives, some 14 inches deep, I tried the experiment of boring holes in the back end, producing a circulation of air across the bottom-board, placing the hives above snow level. I succeeded in getting the circulation, but it seemed to make no difference regarding disease—some had dysentery, and some had not. For more than eight years I experimented on no small scale with different methods of ventilation, both in-doors and out, and could never see that that was the cue to the malady.

Dr. Southard, of Kalamazoo, a clear-headed, close-observing, and quite extensive honey-producer, experimented two or three years with out-door packing, between leaving the board cover tight upon the hives, packing over this with straw and chaff, and removing the cover, in its stead using burlap with the same packing over this. There is quite a difference in the humidity in the interior of shallow hives where in the one case it has only loose cloth and chaff to obstruct its egress, and in the other an inch of wood, two coats of paint, and bee-glue promiscuously distributed over its surface and to seal the joints.

The Doctor is radically in favor of the tightly sealed hives, and so uses them. Two or three years before I tried the same experiment during two winters, and while colonies died both ways, I fanced I preferred the upward ventilation. Does it not look as though these experiments on our part missed the true cause altogether? I would be pleased to hear from the Doctor on the subject. The ordinary reasoner will see at a glance that comparing one man's success with another in a different field, must be short-sighted or unfair. In this locality, bordering Indiana and the marshy region, we have an excess of bee bread in our hives nearly all the year around, and especially in the fall, from various fall weeds, and dysentery rages in its worst form, there having been but one season in fifteen when our apiary was entirely clear from it. This has given me a good chance to study its nature, though, after all, I may be mistaken.

Mr. Corneil's article, like its predecesssors, is prized by me, for whether he has the true theory or not, I always feel as though I know something more of the laws govening human health and proper ventilation after reading them.

Dowagiac, Mich., Nov. 12, 1883.

For the American Bee Journal.

The Cause of Swarms Absconding.

W. H. STEWART.

Under different circumstances, how different is the behavior of honey bees. At times, it would seem that their knowledge was almost complete. At other times, and under the most favorable circumstances, it would seem that they were void of even the least degree of discretion.

For many years, many of the most careful and and close-observing men have studied their wants, habits and mode of living; and have prepared for them almost every conceivable form and size of hive, in some, of which the bees find more and greater advantages than they can find in any hollow tree, or among the rocks; yet we often see them leaving a hive of the most approved style—turn fugitives, and abscond for the woods or caves in the rocks, where we often find them laboring under the most discouraging conditions.

Sometimes we notice that young swarms of bees seem to gladly accept of an old box or nail keg, and at other times will, in a few hours after being hived in one of our best hives, come whirling out with a perfect rush, and leave in spite of all that we give them.

Now, the question is, why do they thus behave?

I will give a little of my experience with bees, and in doing so, will give one reason why bees thus behave—a reason that I have never noticed in bee books or papers.

I began to try to keep bees about 40 years ago, but many times I failed to keep them. When we only knew how to increase by natural swarming, and using only the box hive, many times two or more young swarms would cluster together on the same limb of a tree, and all would have to be hived in the same box together. That, of course, would fill an ordinary hive. That style of hive usually had two, or perhaps three cross-sticks through near the center of the hive—not for the purpose of supporting this heavy mass of bees, but for a support of the heavy combs that were to be built from top to bottom of the box, which were sometimes quite tall.

But hold! here comes a fine young Italian swarm rushing out of a Langstroth hive, in which they were hived yesterday. Well, we went to stop them, and thought we were smart enough to do so; I have detained other swarms in days of yore, by getting to them before the queen had got out, and lifting the hive from the bottom-board, and setting it down, tight on the grass, and thus detaining what remained in the hive, until those that were out began to come back pretty lively; then I put the hive in place again, and all would go well. But this was a young queen with wings not clipped, and she was out before I got the hive closed (as above), and away she went for the woods with her half of the swarm, and I put the half that I detained in their old original home. They were hived on one frame of young brood from their original home, 4 frames of empty combs, and enough more frames of foundation to fill a one-story Langstroth hive, new, clean, nice, shaded, and with plenty of ventilation at the bottom! Why did they leave? Had they a plurality of queens?

I was going to tell why young swarms leave their new home, and, as I am writing here on my porch and watching the bees at the same time (doing double duty), out comes those crazy bees—the first swarm that I have thus lost in the last 16 years. This is the first swarm that has ever left a hive that I had furnished with a full set of combs of foundation, and I was about to express an opinion that they would not leave a hive thus furnished. I never had one leave where all the frames were filled with foundation, but this had one brood comb.

Sometimes we think that we have became masters of the situation, and then some little circumstance turns up that satisfies us that there are some things that we have not yet learned. But I have learned one reason why young colonies leave their hive, and I will tell it.

Some 16 years ago, on July 4, I stood near a colony of young bees that I had hived the day before. It was very hot weather, and I was fearful that my bees would leave. It was a very large colony, and I had found that those large colonies were much more apt to leave a hive, than lighter colonies.

I had only been watching them about 5 minutes, when down came a mass of bees (about a quart), making quite a thump on the bottom-board, which was hung to the lower end of the box hive with wire hooks, and open ½ an inch all around, similar to the Oliver Reynolds Vermont hive. As the bees struck the bottom-board they came rushing out, and I thought they would leave; but they soon went back and became quiet. I stood watching about 10 minutes longer, when down came the whole colony at once, and out they went with a perfect rush, and this time they left none behind except the queen, whose wings were clipped at the time that I hived them; she came hopping around on the edge of the bottom-board. I caught her and held her about 5 minutes, while the swarm were gone, quite out of my sight and hearing. I began to think that they had another queen, and had gone to the woods for sure; but they missed their queen, and back they came, and entered the hive again. I gave them their queen, and then all went well.

I began to study over the matter, and came to the conclusion that it was for the want of proper support, which caused the bees to fall from the top of the hive, and that the fall frightened them and made them leave. Only one tier of bees could come in contact with the top-board, and they must start the first comb-building, and at the same time, sustain the weight of the great mass of bees that hung to them, and, as it was very warm, the task was more than they could endure; and when their strength was exhausted, they let go, and all came down together.

I made up my mind that if bees had ample support until they had plenty of combs to hold to, they would stay in almost any kind of hive.

I then got some green bushes, stripped off the leaves and filled the top half of the hive so full, that there was no place but that the small twigs came within 2 or 3 inches of each other. I fastened the buts of the brush to the sides of the hive with small nails. I hived the next swarm in a box thus rigged and all went well; also, the next, and kept it up until I had, in after years, thus hived over 300, and had no further trouble with absconding swarms.

When foundation came into use, I obtained a mill and began using frame hives. I gave full sheets of foundation, and, as I had no trouble with swarms leaving, I concluded that foundation answered the same purpose in supporting the cluster, that the brush did.

Since I began writing this, I have read a letter in the *Gleanings* for August, by Mr. Doolittle, in which he gives it as his opinion; and also that of Mr. Betsinger, that bees are more apt to leave a hive having a card of brood, than one having only foundation.

Before I used the brush, I had for 20 years lost a majority of my heaviest swarms by absconding, and now, if the trouble is to come up again, it will be rather a serious matter. Has any one lost bees that were hived on a full set of full sheets of foundation? Let us hear from them.

Orion, Wis.

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For the American Bee Journal.

The Improvement of Bees.

L. C. JOHNSON, M. D.

Previous to the introduction into England of the Godolphin and Darley Arabian horses, the breed of English horses was as celebrated for its worthlessness as it has since become (by judicious crossing and selecting) for its splendid qualities.

By breeding from that grand horse, Eclipse, who never was beaten, and whose power of speed seemed unlimited, the English brought up their sluggish breed to be a race of "racers."

By careful crossing, and selecting from the hardy and strong, though not large, Suffolk Punch breed, they have produced the monstrous draft horses of London, which are the wonder and admiration of lovers of horses the world over.

By a long course of careful selecting and crossing from the old domestic cattle of Europe, whose best steers weighed but little more than 1,000 pounds, cattle men now rear steers weighing 3,000 pounds and more. And what is true of horses and cattle, is equally true of other kinds of domestic stock. The magnificent Cochins, the beautiful Spanish, and the tender, luscious Dorking, attest the success of intelligent skill in the crossing and select breeding of the barn-yard fowls.

No successful farmer could be induced to feed for market the long-legged, slim-nosed, slab-sided, elm-peelers, formerly sold for hogs.

Turning to our fruits and vegetables, we find that high culture, with careful selecting and crossing, has produced marvelous results. From the *Solaneum lycopersecum*, common wild tomato, we have developed the magnificent garden tomato which is so justly regarded as one of our very finest fruits. Likewise the potato has been brought up from a worthless hard-woody tuber, to be a food-staple for millions of Earth's people to almost live upon. The strawberry, from a berry no larger than the end of a finger, has developed the monstrous Sharpless, and many other varieties, measuring six inches and more in circumference.

These results have been obtained, not by opposing Nature's processes, but by selecting and perpetuating her best products. The very essence of improvement in either animals or plants, is to develop the good points and banish bad ones.

There is neither animal or plant that offers greater facilities for this than does the honey bee; for, if we have a single choice queen, we may, in a few short weeks, have the entire apiary to consist of her offspring. To accomplish this, we have only to destroy queens whose bees possess bad qualities, and substitute queens reared from our better strains.

If we are to improve our bees, we must first have clear conceptions of the qualities to be desired, in our ideal or perfect bee. Then, bearing in mind the character and qualities of the different races we have to begin with, we are prepared to so manage our apiaries as to produce a better strain of bees than any we now possess.

The "ideal queen" should be large, strong, active, and very prolific, as it depends upon her to keep up a population of from 40,000 to 70,000 insects, whose average life is less than two months during the working season. A strong colony should have at least 60,000 bees, during the June and July honey harvest, and, if their average life is two months, the queen must lay 1,000 eggs per day to keep up the strength of the colony, to say nothing of the thousands that are to be reared for swarming.

The "ideal bee," that such a queen should rear, must possess, in the highest degree, the qualities of energy, hardiness and gentleness. Energy sufficient to induce it to gather and store honey, whenever and wherever it is to be found. But some may object, that if we get bees full of energy and vim, they will pounce upon and rob their weaker neighbors. I tell you, nay; for it is not the busy, energetic colonies whose workers go to the fields early and late, and who store up for us 100 pounds and more of nice comb honey who do the robbing. The danger is from those colonies which have thousands of idle bees, lying around all day long. They, like idle people, find some mischief still to do.

Hardiness is an essential quality for this typical bee; its life is a life of labor; joyous and happy it may be, flitting from flower to flower, sipping nectar, "the food of the Gods," from the beauteous cups of Nature's own laboratory, yet the labor is severe and constant, taxing the powers of the insect to the utmost, during the honey harvest. Bees, weighing but 1¼ grains, often carry home to the hive 2 grains of honey, dropping almost exhausted at the portal of home, only to rest for a moment, then to hasten in, unload and again go to the fields to renew the burden.

Gentleness is a quality only necessary for man's convenience; it is true, we can handle them in spite of their crossness, but it is so much more pleasant, and more conducive to a serene frame of mind, to handle kind and gentle bees. So much for our "ideal bee." Let us now consider some of the qualities possessed by the different races of bees.

There are now, in this country, at least five distinct races of our common hive bee, the Syrian, Italian, black or German, Egyptian and Cyprian. The Syrian queens are wonderfully fertile. I have known them to lay nearly 6,000 eggs in 24 hours; on one occasion, I placed a frame of foundation in a Syrian colony, at 9 a. m., and at 5 p. m. of the same day, I found the cells drawn out, but no eggs; at 2 p. m. of the next day, I removed it and placed it in a queenless nucleus, where it was proven to contain no less than 5,500 eggs, all deposited by one queen in less than 21 hours! These queens are exceedingly strong and hardy, often being able to fly from the cell as soon as they cut their way out, which occurs in from 12 to 14 days, or from 2 to 4 days earlier than the Italian or German bees.

Their bees come out of the cell in 17 days from the time the eggs are deposited in the cell, or 4 days earlier than do Italians or Germans. This, I think, to be due more to the abundance of food furnished to the larvæ, than to any essential difference in their natural time of development. These bees give food in such abundance to the larvæ, as almost to cover them, like the queen larvæ is covered and floated in the royal jelly, so prodigally supplied in the queen-cells. The Germans and Italians are poor nurses, leaving the larvæ to become hungry, until at times they may be seen with their necks stretched and mouths gaping, mutely pleading for more of the food which brings them life.

The Syrian bees are possessed of wonderful energy, working early and late, flying far and wide in search of stores; they come rushing from the hive, and are off like a flash to the fields, returning heavily burdened from the fields of toil, they hasten past the threshold of home as though the fate of nations depended upon their speed; and this tremendous activity is kept up all day long. This race has the reputation of being more cross than Italians. This, I think, to be due to their being more irritable on the first opening of the hive, and to the fact that they are more sensitive to any jarring of their hives or frames than are the Italians. The latter stick closely to their combs after a jar, which would send dozens of the Syrian bees upon the war-path.

If proper care and gentleness is used in opening the hive and handling the frame, they are not, I think, any more irascible than are the Italians. In rearing queens, they will often build from 30 to 50 cells upon a single frame of brood. Their fighting qualities abolish all danger of robbing, as they not only seize an intruder before he gets inside of the hive, but they will often dart upon an intruder while a foot or more from the entrance.

The Cyprians are very similar in every respect to the Syrian bees, except they are, possibly, a little more irritable and nervous. They have the same intense energy and combativeness. When once aroused, it is almost impossible to subdue either of these races by smoke. They are, I think, longer-lived than the other races.

The Egyptians are quite similar in appearance to the Italians, only they are somewhat smaller and lighter-colored. Their queens are wonderfully fertile, "breeding all the year around," and, without very judicious management, their owner will get all bees and no honey.

The Italians are the beautiful golden bees which revolutionized our bee-keeping, and, by their gentleness and docility, made scientific apiculture pleasant and profitable. Their queens are more fertile than the Germans, but less so than the Syrians. The same is true as to strength and hardiness, they, in common with the Syrians and Cyprians, being able to drag out and fly off with the larva of the bee-moth, which was formerly such a pest to bee-keepers. As honey-gatherers, they are almost equal to the Syrian and Cyprian bees; that is, a full colony of Italians and a full colony of Syrians or Cyprians would probably gather nearly equal amounts of honey, but the greater fertility of the Syrian queens give them the advantage by enabling them to have a full hive at the beginning of the honey harvest. In gentleness, the Italians are undoubtedly ahead of any other race, yet this gentleness has a limit, and they may be aroused into a perfect frenzy of ungovernable rage. If attacked by robbers, they form a cordon of guards about the entrance, which effectually bars it.

As to the German or black bees, it is difficult to name any one point in which they excel the yellow races, and yet there are men of no small experience in apiculture, who maintain that they are equally as good as any yellow race. It is claimed by their friends that they are less apt to winter-kill, and that they are better comb builders and make finer-appearing comb honey.

Now, as to the method of securing the "ideal bee" from these different races, I should recommend that a pure Syrian queen be fertilized by a hybrid drone from the Italian and German races; that is, the drone should be from the egg of a queen whose mother was a pure Italian, mated with a German drone. This would produce a bee one-half Syrian, one-fourth Italian, and one-fourth German.

I would have this much of the German blood, not because I think the German superior or even equal to the yellow races, but because I believe it to be demonstrated fact, that, other things being equal, this admixture of the German blood greatly increases the honey-gathering qualities of our bees.

Another point of equal or even greater importance than the race we breed from, is the character of the queen from whose brood we rear our queens; she should be our very choicest in every respect: size, beauty, fertility, strength and activity; her bees should be tested and proven to be strong honey-gatherers, good comb-builders, full size, and gentle, (the color is a matter of no importance, though I must confess that, other things being equal, I greatly prefer the beautiful golden-banded fellows.)

The drones with which our queens are to be mated, is a matter we cannot absolutely control, unless we succeed in getting queens fertilized in a closed room, which I intend giving an extensive experimental trial next summer; without this, we can, by careful management, control it to a very large extent, unless we have neighbors within a very few rods who have bad bees.

My plan is to select a choice queen or queens such as I desire to breed from, and very early in the spring to place a section of drone comb in the center of the brood chamber of their colonies, (and I usually have no difficulty in getting them filled with drone eggs.) I then remove them and put some sections in such colonies as I do not want drones from. The bees in this colony now care for the drone larvæ, and in due time the drones are hatched and the sections removed. The colony is thus supplied with the right kind of drones, and are satisfied without rearing drones from their own queen. If they attempt to do so, their drone larvæ are removed, and more drone brood given to them from a selected queen. I thus have my apiary supplied with selected drones, and very rarely have I had a mismated queen, although there are dozens of black colonies within half a mile of my apiary. I think if an apiary is properly supplied with drones, a very large majority of its young queens will find their mates from the home yard.

In rearing queens, I place a strip of foundation in a frame, and hang it in the center of the colony containing the queen I wish to breed from, and allow it to remain until drawn out and partially filled with eggs. In the mean time I prepare a strong nucleus of four frames of young Syrian bees, with plenty of honey and pollen, but no unsealed brood. In the center of this nucleus I place the frame of eggs from my choice queen. I thus get the whole attention of my nucleus concentrated upon a comparatively few eggs, and the queen larvæ are kept abundantly supplied with royal jelly, from their hatching and before, until they are capped over. On the 11th day from the laying of the egg, I remove the frame of cells, without any bees, to a lamp nursery, where, if I happen to be unable to attend to the queens as fast as hatched, they will live peaceably together for several hours. The young queens are at once introduced to queenless nuclei, previously prepared for them, where they remain until fertilized and ready for use. All the small, sluggish and feeble queens are destroyed, and I think I thus secure the best possible results.

If this weeding-out process were rigorously persisted in, other things being equal, I think we would get more uniform results from our colonies, and not have one colony yielding 100 pounds or more of surplus, while another by its side gives only 10 pounds, or even nothing; in other words, perfect, strong, active queens should give us strong, active honey-gatherers.

Finally, whatever race or races of bees we keep, let us breed both our queens and drones only from our very best queens.

Fountain City, Ind.

☞ Do not let your numbers of the Bee Journal for 1883 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

For the American Bee Journal.

Straight Combs without Separators.

W. Z. HUTCHINSON.

The width of the sections has much to do with getting straight even combs. To get straight even combs in sections 2 inches wide, separators are needed. The nearer combs approach to the thickness that bees naturally build them, the more perfect they will be. Why are not separators needed between brood combs? Instead of attempting to answer, let producers take a hint and make their sections accordingly.

It is my opinion that 1½ inches is about the best width for sections used without separators; that is, to obtain the straightest combs. The sections that I used last season were 1 11-16 inches wide; no separators were used, yet every section was crated. Let no one suppose, however, that every section was perfectly true, and would fit anywhere, as would sections built with separators; occasionally a comb would be "plump" or "bulged," but, of course, the adjoining ones would be "thin" or concave; hence, by the exercise of a little care, all was crated without trouble. If a plump section was found finished, and the adjoining ones unfinished, the plump section was removed and its place filled with a partly finished section, or a section filled with foundation, and, in crating, a lookout was kept for "lean" sections; by thus putting together the thick and thin sections, there was no trouble. Nine-tenths of the sections would fit anywhere, and truth compelled me to say that the "bulging" was done by pure Italians. The sections filled by hybrids were like so many "bricks," no crookedness, no bulges, no bear combs, while the cappings were of a snowy whiteness. So marked was the difference in the workmanship of the Italians and the hybrids, that, after the cases of sections had been removed from the hives, and stacked up, my brother or myself could look them over and tell which cases had been filled by hybrids and which by Italians.

I use an 8-frame Langstroth hive, and the Heddon case. The sections stand parallel with the brood frames, and I am careful to have the hives stand perfectly level, except that they are slightly raised at the back end. I have tried putting a small piece of foundation in each section as a "starter," have filled the sections partly full, and have filled the sections entirely full, and I am decidedly in favor of filling the sections full, leaving ⅛ of an inch at each side of the foundation, and ¼ of an inch at the bottom. When the section is filled full of foundation, the cells are drawn out full length next to the wood, and the comb is well fastened in all around the outside, being built out nearly even with the edge of the wood; while, if the section is only partly filled, the cells decrease in depth as they approach the side of the section, and are fastened with only a thin strip of bear comb that is easily broken. The top and bottom bars of sections should be ⅜ of an inch narrower than the side bars, instead of only ¼, as usually made. This is a greater help in securing straight combs without separators than one would suppose. It seems to induce the bees to leave a greater space between the combs.

There is one other point. The bees should be given the proper amount of room, neither be crowded nor given too much room. When too much room is given, the bees are liable to work first upon one side only, of some of the foundation, and, as a result, it warps and bends. By the way, Dr. Miller, at the Northwestern Convention, said that he thought foundation made upon a roller mill was more liable to warp or curl than that made upon a press, and I am inclined to agree with him. I used the Given foundation, last year, and ask for nothing better.

In regard to the queen being more liable to lay in thin than thick combs, I would say that there is a stay in the growth of even the thickest comb when the queen would be able to lay in it, and if she enters the surplus department, she makes it her business to be on hand with eggs just as fast as the combs are drawn to the proper depth, and it should be remembered that she is capable of laying in a cell that is not much more than ⅛ of an inch in depth. It is my opinion that the width of sections has nothing to do with influencing the queen in regard to her entering the surplus receptacles.

To recapitulate: Have dark Italians with a dash of the brown German blood, use narrow sections, fill them with Given foundation, have the hives level, and keep the surplus department full of bees.

Rogersville, Mich., Nov. 10, 1883.

For the American Bee Journal.

One of My Experiences.

C. THEILMAN.

On page 542 of the BEE JOURNAL, Messrs. Youngman and Trussell state that their bees have reared drones and queens from worker eggs and larvæ, upon which the editor remarks that "it will be very generally disbelieved, that bees can and will rear drones from worker eggs." I have had this summer (for the first time in 14 years of bee-keeping), an experience which I will give, and which satisfies my own mind, that some theories do not always prove correct.

One day in July, I hived a large swarm of pure Cyprians, but on the next day I found that a good many of the bees went back to the old hive, which left the colony weaker that I wished to have them; so I concluded to strengthen them with a second swarm that came out on the next day, knowing that the Cyprians would not be willing to accept them, as I had some sad experience before. On account of their being in the hive for 2 days, I used peppermint, giving them a good spray after shaking them from the frames in front of the hive, uniting the second swarm with them. Before they were all in the hive, the expected fight had commenced; therefore I renewed the same "shaking-off" performance, without better results; then I gave them a good spray in the hive and let them be, as I had other things to do. The next day I looked for the Cyprians, but found the hive empty with two pieces of worker comb of the size of a hand; one of them was nearly filled with eggs, so I put a swarm, that had just issued, into this deserted hive. The new colony seemed to be contented, as they were working lively.

About eight days after hiving them, I examined and found no brood, except in the piece above described, where there were three queen cells and about 25 capped drone cells (enlarged worker cells), and about 150 to 200 worker cells nicely capped over. About two weeks after, I looked into the hive again and found the brood all hatched; at least the cells were empty and a young queen had just commenced laying.

Now, I leave this case of experiment to the readers of the BEE JOURNAL to judge, whether or not bees can, at their will, rear either workers, drones or queen bees from the eggs laid in worker cells, for the possibility of other eggs being deposited in this piece of comb, other than from the queen of the first swarm, is almost excluded.

The last swarm, of course, was queenless, and therefore provided for a queen and drones.

Thielmanton, Minn., Nov. 7, 1883.

For the American Bee Journal.

Description of My Bee-Feeder.

DR. J. S. MC ALLISTER.

As there has been several descriptions of bee-feeders published in the BEE JOURNAL of late, I thought I would describe one of mine, which I think is very practical, and one that can easily be made by all, especially those who use the American or square frame, with tight top-bars, or bars 1½ inches wide. It can be made either one-half the depth of the frame, or use the whole frame, which I think is best, and then let the bees build comb or draw out foundation in the same, and fill with honey for winter use, the same as any other frame; place it in the center of the brood nest for winter, and use it at any time a feeder is needed. To make the frame and feeder complete, nail a bottom-bar about one-half way up the frame or a little more, which is the same width at the end-bar, which is generally made of ⅞ stuff. Then take two top-bars and shorten them a little, and nail one on each side of the middle-bar, to form a trough the length of the frame; now bore a hole (about one-half inch hole will do), through the top-bar, and in the hole place a hollow tin tube, long enough to reach very near the bottom of the trough, and your feeder is complete. Very thin stuff for the sides of the trough is the best, as it will not take up as much room. I like it the best of any device that I have ever seen.

By placing a funnel in the hollow tube when filling the feeder, there is no need of spilling a drop. It can be made a ventilator or corked up, when no ventilation is needed, by having the tube run close to the bottom of the feeder; the bees will not pass through it. There seems to be no need of any float, and the bees will not fill the trough with comb.

I think I was the originator of what is now known as the pepper-box feeder, and had some gentleman (I do not remember his name), take one to the Vermont Bee-Keepers' Association, about 15 years ago. I used it with a rim that fit over wire gauze that had been stamped to fit upon the rim, so when used over a hole in the honey board, the feeder could be removed without letting out the bees, similar to the Van Dusen feeder.

Allen Pringle's article on Wintering Bees (page 547) gives many good ideas, and I often wonder why so many recommend doubling-up in the fall, unless they have too many bees or more wealth than they know what to do with, for I never think of destroying a nice Italian queen, if I can find at least four good, full frames of bees to winter her in.

I live in so much of a honey district, that I hardly ever feed. I have increased from 18 to 40 this season, and took about 2,000 lbs of honey. I shall winter on the summer stands, as usual.

Columbus, Neb., Nov. 9, 1883.

For the American Bee Journal.

The Best Bees, Winter Packing, etc.

E. P. CHURCHILL.

This has been one of the best honey seasons here for years, though rather wet and cold in the spring, yet with proper care in early stimulative feeding, I got my bees strong for apple bloom, which they improved; and, as I am in an orchard section, they took in a good quantity of nice honey.

One very important question (which is often asked), is how to control swarming? I know of but two ways, and that to only a certain extent; first, get away from Italians, and work for extracted honey; for when we apply the sections to the Italians, out they go, even often without cells, and when they once get on a swarming rage, who can stop them? And when we come to extract from Italians, they cling to the combs so closely that it is no small job to go through a number of them. Does it not look as though we had gone a little too much for color? I think it has been over-done, many times, though I would not condemn the yellow bees, for they have some desirable points. They are so gentle to handle, beautiful to look at, and stay on the combs remarkably; yet, when we come to shake them over the hive, what then? Instead of dropping off (as some complain that the blacks and hybrids do), they scatter all around the hive, and will not gather in half as fast as others.

It is claimed by some that they breed later in the season than others, but I fail to see any difference in that respect. Again, the honey capped by them is not as nice as by others (even if they stay to cap it). So, why can any one say they are so far ahead of others?

I have reared queens for my own use from my best hybrids, and until I am more dissatisfied with them, I shall uphold them for their good qualities. The bees are easy to handle, and when I give them a case of sections, I am quite sure to know where to find them.

I believe we are working to disadvantage by using such wide boxes, and also too light foundation. If any one doubts this, let him try a few sheets of thin foundation in brood frames, and see if they will not leave it until they are obliged to use it or go without. I have experimented considerably in this matter, and shall use thicker foundation for boxes, in the future.

I shall also try a few cases with sections only a little more than one inch. I do not believe we know what can be done, any more than Mr. Scoville did, before he tried feeding bees all winter, and reported that they came through wonderfully well, for it has been the old story that bees must not be disturbed in winter. Who knows but that the Italians have more good reasoning powers than to think of accepting those thin sheets of foundation. This may be the reason that the other bees do the best in boxes.

I have been told by a large breeder and dealer in bees, etc., that he paid $8.00 for a queen, and, after testing her, sold her and a good strong colony for $9.00, and said they were the laziest bees he ever saw, and the yellowest.

I started with 11 colonies last spring; took 200 lbs. of extracted honey, and as much or more of comb honey, reared 34 queens, and now have 33 good colonies. I have packed most of my bees in a new manner, and will tell you how it is. I slant a good shingle or board, not more than 10 inches wide, in front of the hive, so as to reach up about to the upper story; then I shake bedding or meadow hay all up about the hive, most in front; then I stand a few evergreens, not much taller than the hive, about this; then I tie the buts of two long, slim sticks together, then take these around the whole, and have the tied cords come at one corner of the hive, and then tie the tops together. Now, I have a stay for the whole. I tuck under more broughs, and hay enough to make it perfectly dark, then roll in a few clusters of hay about the upper part, below the cover, and I feel that I have one of the best packings extent. No cold can get into the entrances in windy weather, nor snow to clog the entrance, nor is it so close as to smother them. I open the entrance about 3 inches.

I am using mostly leaves for packing over the bees, and instead of a crooked stick over the frames. I make a rack of two pieces across the frames, one inch from the ends of the hive, then I nail strips on these, so as to hold up the packing. The end strips are about an inch high. These will not throw the division boards out of place. I allow the one in at each end for room to crowd down packing, as it is always coldest at the ends, in a movable two-story hive, but I use mostly two-story chaff hives of my own make, and like them best of all.

In this way of packing we can take off the covers, feed the bees, etc., if we wish, and it does away with the great loss of bees by flying, for they are so cool that they do not know what the weather is outside. I think it next to a snow drift, only better, and the packing will hold some of that when it comes. I do not say I know this to be an improvement, but I certainly think so.

North Auburn, Me., Nov. 5, 1883.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

☞ In reply to Mr. A. J. Fisher, on page 564, I will say that after considerable experimenting the past season, we prefer our sections 1½ inches wide to be used without separators, especially with the smaller-sized sections. No doubt half size starters or pieces of foundation will guide them in sections as straightly as pieces of full-size, but no more so, if the full-size pieces are properly adjusted. A great reason for using full-size pieces in sections, is to prevent the building of drone comb there, in which the queen is very apt to lay, if we have none, or very little comb in the brood chamber, which is the case now with more progressive bee-keepers, who are using full sheets of worker foundation in all the brood frames. I do not think there is much, if any more danger of the queen breeding in thin than in thicker sections, as she deposits her eggs at or previous to that point in the growth of the comb, when it is ⅞ thick. What prevents her from occupying it, is the tendency on the part or the bees to fill it with honey as fast as built.

Yes; we find the thinner combs built straighter.

Cellar Ventilation.

I intend to winter my bees in a room partitioned off in the cellar, and intend to have a 2½ inch pipe to go through the floor and connect with the stove-pipe. Will Mr. Heddon please answer through the "What and How" department of the BEE JOURNAL if it would be better to have a branch from the main pipe in the room, and have the main pipe go within a foot of the floor, and the other near the ceiling of the bee room, so as to warm the air from the bottom and top of the bee room ?

Hamilton, Ont. A SUBSCRIBER.

ANSWER.—Your stove above your cellar will not " warm " the air in any part of your bee room at all. Should that word warm not be draw? Changing it thus, I would say that I would not use any branch to the main pipe ; I would run the main pipe to the bottom of the cellar, resting it up on legs, 5 or 6 inches, and I would prefer a pipe 5 or 6 inches in diameter.

SELECTIONS FROM OUR LETTER BOX

Good Qualities of Cyprian Bees.

As they are often condemned for stinging so readily, I will enumerate their good qualities: 1. They never volunteer an attack on anything. You can pass the hive, and they may alight on you, but they do not sting. 2. They are superior honey-gatherers. 3. They winter better than any others. When at the St. Louis fair, all thought them "the coming bee." When they are *pure*, you can handle them with pleasure by using a little smoke. This is the second year that I have kept pure Cyprians, and I think them ahead of all others. I started the last season with 26 colonies—increased to 53, mostly by natural swarming. Though there was no fall honey, they go into winter quarters in good condition. On Oct. 7, two swarms of bees came to my apiary from a neighbor 4 miles away, who kept them on the old-fogy plan. I hived them and they are doing well. What caused them to swarm ?

Casey, Ill. D. R. ROSEBROUGH.

[They were evidently dissatisfied with their surroundings, and, being disgusted with their condition, they concluded to seek other quarters.—ED.]

Bees Buried in a Clamp.

My bees have done very well, this season. I have 33 colonies in fair condition. I am burying them in a clamp. W. W. TRUSSEL.

Colby, Mich., Nov. 12, 1883.

Wintering Bees in Northern Kentucky.

The way I winter my bees, here in northern Kentucky, has proved a perfect success every time, so far. I simply make a shed long enough to hold my bees, and about 6 feet wide, three sides sided up as tightly as possible, leaving the side facing the southeast open. I then place on the ground about 3 feet of straw, then set the bench on top of the straw, which will sink down about level with the top of the straw, in a short time ; I then put on the hives, with the entrance facing the southeast. This may not do in a colder part of the country, but here in Kentucky it does well, or at least it has done so with me. I have 3 colonies as good Italians as I can get ; the rest in my apiary are hybrids ; although I am partial to the Italians, I must confess that the hybrids are the best honey gathers ; at least, mine are.

ADRON B'HYMER.

Kenton Co., Ky., Nov. 11, 1883.

Special Premium.

Your correspondent H., in his report of the St. Joseph Inter-State Exposition, omitted to mention the special premium for the best 30 pounds of comb honey on exhibition ($29.00), which was awarded to me. I think the report, as it stands, is hardly just to me. The entry upon which I took a second premium required quantity as well as quality.

J. B. STANCLIFT.

Brookfield, Mo., Nov. 7, 1883.

Too Large.

At our Fair a " Monarch " bee hive was exhibited, but it is not a practical hive at all. 1. It is too large to be carried around—and would require 2 men to move it at all. 2. It is too large for one colony to keep up the required heat. 3. A man should be made of iron to manage an apiary of such. 4 The brood-chamber is large enough for 2 colonies ; it has apartments for extracted honey on top, and at one side of the brood-chamber it has 144 sections, quite enough for 2 hives. Beginners should be careful not to use such a hive.

W. R. STIRLING.

Fairfield, Ont., Nov. 12, 1883.

Lath Hives.

My bees are all packed in sawdust in hives, which neighbor Clow and I use ; we make them of laths, and put 2 colonies in a hive. We use the Gallup frame, and can extend the hive, when the packing is removed from the sides, making room for 13 or 14 frames. When the honey season is over, we take out the side frames, and put in the division boards, which are made of laths, to make the hive porous; that leaves the hive 12x14 inches inside. I leave 9 frames for winter, and crowd the bees on to them. I then put some ½ inch strips on the top of the frames, and cover all with burlap, then put sawdust on the top of the whole hive, to the depth of about 3 inches. The hive is 2 feet high, to receive surplus boxes. The space is all open up to the roof, which is made of shingles, which makes a good roof. Bees did not do very well this season ; we only had about half a crop. Two of my colonies gave 150 pounds of comb honey in one-pound sections ; the others did not do so well. One of these queens was a cross between the Cyprian and Italian ; the other a cross between the Cyprian and German or brown bee. They are both tolerably firey. The one with the German blood makes the whitest combs ; the other has the most delicate and docile bees. I have but 22 colonies. I might have had more if had let them swarm. I use racks holding 30 pound boxes in each, which fills the top of the brood-chamber. I have no trouble in knowing when sections are full, and no trouble to speak of in taking them off.

D. C. McLEOD.

Pana, Ill., Nov. 14, 1883.

Honey Crop, Red-Headed Drones, etc.

My bees are hybrids from Syrian, Italian and blacks. This year I commenced with 28 colonies ; increased to 54, and extracted 2,800 pounds of honey. The least, from my poorest colony, being 30 pounds ; and the most, from my best, a pure Syrian colony, was 160 pounds. This is the best I have ever done, with any kind of bees. The most serious drawback to the Syrians, is that it takes about 10 days before the young queen begins to lay. The bees go into the sections with a will. Syrian queens need 2 more brood frames than any others. I could have had 5,000 pounds, this summer, if I had extracted every 4 days ; I only extracted 3 times in as many weeks. During the basswood bloom, I took 900 pounds in one day, just what the boxes held. I have 62 colonies in the cellar in good condition. I have sold my honey at home at an average of 11 cents per pound. I have a number of colonies which had red-headed drones. Where did they come from ? I had 2 with white eyes. The queens are from a pure Syrian colony, and have half black and half red heads.

FAYETTE LEE.

Cokato, Minn., Nov. 7, 1883.

[Red-headed drones, as well as grey-headed ones, have been often mentioned. It is simply a freak of nature.—ED.]

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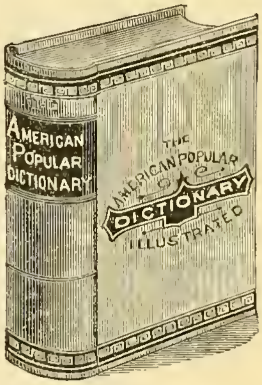
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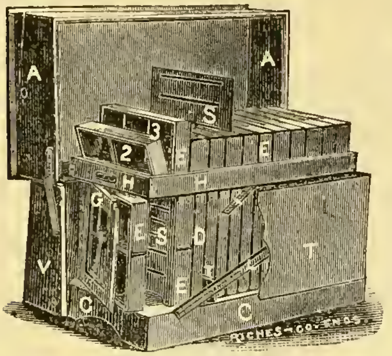

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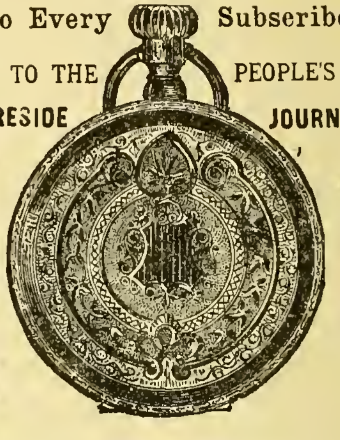

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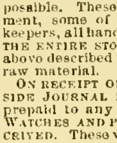

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VOL. XIX. CHICAGO, ILL., NOVEMBER 28, 1883. No. 48.

THE AMERICAN BEE JOURNAL
Published every Wednesday, by
THOMAS G. NEWMAN,
Editor and Proprietor,

Call Things by their Right Names.

For a long time we have contemplated writing an article on the above subject, but deferred it, because of the labor necessary to cover the entire ground. Mr. F. L. Dougherty lately gave the following, on this subject, in the *Indiana Farmer*, which we quote as an introduction to what we wish to say. He says:

> "Do not call a frame, a 'rack' or a 'sash;' call it a frame. When filled with comb, it may be called a comb. A rack is a form which rests on the hive, to hold sections. Sections are for surplus comb honey. A hive is a box or other receptacle for bees. A hive full of bees is a colony. When a colony is on the wing or clustered, it is a swarm."

That is the whole thing in a nutshell; but to reform this extensive abuse of language, we think will require more than a passing remark. The nomenclature of bee-keeping is sadly out of harmony, and it needs a thorough over-hauling to induce correspondents to use proper terms, when writing on bee topics. Quite often it is very difficult to determine what idea is meant to be conveyed, because of this habit of calling things by their *wrong* names.

Some writer astonishes us with the remark that he "wintered" his "stands in the cellar," and that "they came out in bad shape." The "stands" are the supports upon which the hives rest, and as they may be left on the places where the hives stood in the summer, we cannot think that the writer meant that they were taken into the cellar at all, so we have to *imagine* that he meant that his colonies of bees were "wintered in the cellar," though he does not say so!

He also says that his "stands" "came out in *bad shape!*" What! Did the "stands" change their shape? If the pieces of wood were nailed in a rectangular form, did they change, of their own accord, to a square "shape?" or, What was the matter?

Again, if we *suppose* that he meant the "colonies of bees" when he said "stands," we are "just as much at sea" to determine what is meant by their "coming out in bad shape!" Did his bees change their *shape?* Were they bees, when put in the cellar, and were they of the shape of mice, rabbits or birds, when taken out? As this cannot be what was meant, we are called upon again to *imagine* that he was speaking about their *condition*. Now, all this confusion would have been averted, if he had simply said that his bees were wintered in the cellar, and when taken out were weak, diseased, or dead, as the case might have been. Such language would have conveyed an intelligent idea, but to say that his "stands" came out of the cellar in bad *shape*, conveys no intelligent idea at all!

Another correspondent assures us that "Mr. —— wintered in his cellar." Did he? Poor fellow; what a pity that he did not have a dwelling house over that cellar in which to live during the winter! We admit that there are thousands in crowded cities who live, both in summer and winter, in cellars, but, alas, "their days are few and full of disease!" But our correspondent evidently did not mean to convey that idea at all—he only *meant* to say that Mr. —— put *his bees* in the cellar to winter *them!* Then, why did he not say so, and convey an intelligent idea?

Another writer astonished us with the assertion that four of his "hives ran away to the woods!" It would have been worth a trip of several miles to see hives running over fields, fences, and perhaps rivers "to the woods!" But he evidently meant to say that four swarms came out of the hives, and *flew* away to the woods. That robs the matter of all obscurity!

Scores of similar nonsensical expressions are used to confuse the reader. We have, for years, studiously avoided using many of such expressions in the Bee Journal, by correcting all manuscripts before giving them into the hands of the printers, and we already notice a very marked improvement among our correspondents. and to encourage further reform, we invite the attention of the reader to the following explanations of terms used in the pursuit of bee-keeping:

Abnormal Swarm.—Bees leaving a hive, from some unnatural cause.

A Colony of Bees.—An organized body of bees; and, when complete, having a queen, a few hundreds of drones, and many thousands of worker bees. Improperly called a swarm, stock, stand, hive, gum, skep, etc.

A Swarm of Bees.—Bees issuing from the parent colony for the purpose of increase.

After-Swarms.—Those issuing subsequent to the first swarm.

Alighting Board.—A board at the entrance, for the bees to alight on.

Apiarist.—An expert bee-keeper.

Apiary.—A place where bees are kept.

Apiary Register.—A book in which to keep a record of both queens and colonies.

Apiculture.—The pursuit of bee-keeping.

Balling a Queen.—A cluster of bees around a strange queen, trying to sting her.

Bee Bread.—Pollen.

Bee Diarrhœa.—A disease of bees, improperly called dysentery.

Bee Gum.—Part of a log which wild bees have inhabited.

Bee Hive.—A box, with suitable fittings, to hold a colony of bees. Improperly called a gum, skep, etc.

Bee House.—A house to hold several colonies of bees.

Bee Moth.—A miller which preys upon the combs.

Bee Pasturage. — Honey-producing trees, plants or shrubs; improperly called artificial pasturage.

Beeswax.—A substance made by bees for building comb.

Broad Frame.—A wide frame for holding sections.

Brood.—Larvæ in all stages.

Brood Combs.—Combs used for breeding purposes.

Cases.—Wide frames to hold sections for surplus honey.

Cells.—Hexagonal birth-place of bees and depositories for honey.

Chaff Hives.—Double-walled boxes, filled in with chaff, for bees, both in summer and winter.

Cluster of Bees.—A festoon of bees clinging to one another.

Comb Basket.—A basket to hold combs in a honey extractor.

Comb Foundation.—Sheets of wax on which the base of cells have been imprinted by a machine, mill or press. Improperly called artificial comb.

Comb Guide.—Small pieces of comb foundation, to guide the bees in building combs in frames or sections.

Comb Honey.—Honey in the comb.

Cushion.—A bag filled with chaff or something porous, to be placed over or at the sides of the frames in cold weather.

Cyprian Bees.—Bees from the Island of Cyprus.

Dividing.—A method of increase by dividing two or more colonies.

Division Board.—Used for contracting the brood-chamber of the hive.

Drones.—Male bees.

Driving Bees.—Drumming on the outside of a box hive, to drive the bees up into an empty box on top.

Entrance.—A passage way for the bees to enter the hive.

Entrance Blocks.—Used for contracting the entrance.

Extracted Honey.—Honey taken from the combs by centrifugal force. Improperly called strained honey, which was obtained by mashing up the combs and straining through cloth.

Granulated Honey.—Honey formed into grains. Improperly called candied and crystalized honey.

Hatching Brood.—That just emerging from the cells.

Honey.—Nectar gathered by bees from flowers.

Honey Board.—A board or slats used over the frames, to support the surplus receptacles.

Honey Extractor.—For extracting honey from the combs by centrifugal force.

Honey Gate.—A faucet for drawing honey from the extractor.

Honey House.—A place for storing and extracting honey, etc.

Honey Knife.—Used for uncapping the cells, before extracting.

House Apiary.—A building having double-walls, in which to keep several colonies of bees.

Hybrids.—A cross between two species of bees.

Italian Bees.—Bees from Italy. Sometimes called Ligurian, because they were imported from Liguria.

Introducing Queens. — Inserting a strange queen in a colony.

Lamp Nursery.—Used in rearing queens.

Larva and Pupa, (plural, Larvæ and Pupæ).—Unsealed brood. The first stage is the egg; the second is the larva; the third, the pupa; the fourth, the imago, the last stage of insect life.

Laying Workers.—Those workers that lay eggs, which produce drones.—Improperly called fertile workers.

Mandibles.—The bees' jaws.

Manipulation.—The handling of bees.

Metal Rabbets.—Strips of folded tin, on which the frames rest.

Movable Frames.—Frames enclosing the breeding combs, by which they can be handled. Improperly called sash, slats, etc.

Natural Swarm.—One that issues naturally.

Nucleus, (plural, Nuclei).—The foundation for a colony, with a queen or eggs from which to rear one, and one or more frames of bees and brood.

Nursing Bees.—Young bees whose duty it is to care for the brood.

Observation Hive.—Having a side or sides of glass, for observing the work of bees.

Overstocking.—When there are more bees in a locality than there is pasturage for their support.

Piping of the Queen.—Notes of anger produced by a queen, who is prevented from killing her rivals, by the bees who intend to swarm.

Pollen.—The farina of flowers, when mixed with honey, the food of young bees.

Pollen Baskets.—A cavity on the hind legs of the workers in which to carry pollen.

Propolis.—Bee glue, a resinous substance gathered from trees, etc., and used by the bees in cementing and filling up cracks, etc., in hives.

Queen.—The mother of the colony.

Queen Cage.—A cage used in shipping or introducing queens.

Queen Cells.—Large cells in which queens are reared.

Queenlessness. — Colonies having no queen.

Queen Rearing. — Rearing of queens. Improperly called raising queens.

Quilt.—A cloth covering for frames.

Rendering Wax.—Melting combs, and clarifying the wax.

Ripe Honey.—Honey that is ready to be capped.

Robbing.—Bees stealing stores from other colonies.

Royal Jelly.—Food of queen larvæ.

Sections.—Small receptacles for surplus honey in the comb.

Separators.—A strip of tin or wood, placed between sections, to insure straight combs.

Spring Dwindling.—Decimation of a colony of bees in spring.

Starters.—Small pieces of foundation or comb fastened to the top of sections, to induce the bees to work in them.

Sting.—The bees' weapon of defense. Drones have none.

Super.—A rack to hold sections on the hive.

Syrian Bees. — Those from Syria or Palestine. Improperly called "Holy Lands."

Tested Queen.—One whose progeny, when tested, is found to be pure.

Transferring.—A transfer of bees and combs from one hive to another.

Unripe or Green Honey.—Honey extracted before being capped, and not evaporated or ripened.

Untested Queens.—Those not tested for purity. Sometimes improperly called "dollar queens."

Virgin Queens.—Queens which have not been fertilized.

Warranted Queens.—Not tested, but guaranteed to be purely fertilized.

Wax Extractor.—For rendering wax, by the aid of steam.

Wedding Flight.—An excursion of a virgin queen to meet a drone.

Wide Frames.—Frames 2 inches wide, to hold sections at the side of the brood-chamber, or in the second story.

Wild Bees.—Those in the woods or rocks, etc.

Wind Breaks.—Hedges or fences to break the force of the wind upon the apiary.

Worker Eggs.—Eggs laid by a fertile queen, which may, at the pleasure of the bees, produce either workers or queens.

Workers.—Undeveloped females, who do the work of the hives. They are improperly called "neuters."

We hope that all who write for publication, or talk at Conventions, will carefully consider this matter, and, in future, *call things by their right names.* It will save much embarrassment by the "confusion of ideas," as well as the annoyance of being misunderstood, when confounding terms. "A word to the wise is sufficient."

Bees in Oregon.

The Northwestern *Farmer & Dairyman*, of Portland, Oregon, gives the following historic account of the introduction of bees into Oregon:

Starnge as it may seem, there were no wild bees to be found in Oregon, and not even on the Pacific coast prior to the introduction of tame ones here. On careful inquiry, we learn from some of the early pioneers that a man named Buck, and at latest accounts still living in California, made the first successful importation of bees into this country, landing with several colonies in Portland during the summer of 1853. These bees were principally purchased at the apiary of John I. Wood, of Sullivan County, New York. Mr. Jas. Terwilliger, of South Portland, had the good fortune to receive the first colony sold by Mr. Buck in Oregon, paying $125 therefor. Mr. Thos. Stephens bought the second one sold, paying the same price. These bees were brought to this country by way of the Isthmus route and San Francisco, where, after a stoppage of some considerable time, they were re-shipped to their destination—Oregon.

Mr. Gideon Tibbetts, of East Portland, is authority for the statement that his son-in-law, Dr. D. S. Baker, now of Walla Walla, purchased a colony of bees in New York or Pennsylvania, about the year 1852, and started with them for Oregon, coming by way of Panama. On reaching San Francisco, the bees were found alive and well. They were then re-shipped to Portland, and came on the same steamer in which Dr. Baker was himself a passenger. While on the way hither from the Golden Gate, the bees were robbed of their honey by thieving sailors or passengers on board, and, on the arrival of the vessel at this port, were all found dead, having perished through suffocation at the time of the robbery, or succumbed to hunger afterwards.

In 1858, Mr. Chas. Knowles brought 30 colonies of bees from California, on the old steamer Columbia, and located with them on the Tualatin Plains. In a season or two his colonies increased altogether to about 100, which he sold for $125 each, and afterwards moved to the lower Columbia river and made a fresh start in the business.

When bees were first introduced into Oregon, they were objects of much curiosity to the Indians, and to many of the native young people among the whites, and there were many persons who traveled long distances to see them at work.

From a small beginning, a few years ago, bee-culture has made great developments in this Northwest land, and we hope, at no distant day, to see it made one of the chief industries of this State and Washington. To those of our citizens who have given the careful and intelligent attention demanded, bee-culture has always returned handsome profits.

Be Courteous, even if you Cannot Approve.

We are having considerable discussion in the BEE JOURNAL now. This is all right, if it is written kindly, and without sarcasm. Discussion is the royal road to progress and improvement, and should at all times be encouraged. But unkind personalities are never welcome, and only show a lack of argument by the person using them. We are more than pleased with many controversial articles contained in several late numbers, and hope the same kind words, but strong arguments will characterize those that are to follow. One of our correspondents, in a private letter, gives his views of the subject in the following language, which we heartily endorse:

"I trust that my opponents, if I have any, will try and be courteous, as while I am ready at any time to give blow for blow, and sarcasm for sarcasm, I much dislike so to do, for the reason, that no good comes from it. It may please some readers to find articles, from time to time, where some one vents spleen, but the majority of bee-keepers, if "wedded to their idols," still are gentlemen, and dislike fights where paper bullets are used."

☞ Owing to the death of our Secretary, Mr. T. Brookins, please announce in the BEE JOURNAL that the annual meeting of the Champlain Valley Bee-Keepers' Association, will meet in the parlors of the Addison House, Middleburg, Vt., the second Thursday in January, 1884.

J. E. CRANE, *Pres.*

☞ The editors of the *American Agriculturist* claim that the November number is not only superior to any other issue of that periodical issued during its 43 years of existence, but is far superior to any number of any similar journal in the world. They certainly have presented an amount and variety of matter which, considering the price of the periodical, is remarkable.

☞ Do not let your numbers of the BEE JOURNAL for 1883 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

Honey and Beeswax Market

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., Nov. 25, 1883.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—The market is slow; arrivals exceed the demand which, however, has improved some. There is a better demand for comb honey, and supplies are short, which, no doubt, is temporary, as usual. Last year at about this time, comb honey was at its highest, when our sanguine friends very naturally held on, expecting more. However, large supplies commenced to arrive, and prices kept going down steadily. Bee-keepers in general bent their energies on the production of extracted honey last season, more than ever before. We had a large crop, and extracted has been dull so far, not only because of the large supply, but because manufacturers complain of dullness in their business. Consequently, we have reason to believe that the present slow market is temporary.

The present state of the honey market gives our bee-keeping friends another chance for a disappointment, to-wit: That of over-production of comb honey another season. This is merely an idea of my own, and our friends may take it for what it is worth.

Extracted honey brings 7@9c. on arrival. Best comb honey, 16@17c. in small sections.

BEESWAX—Is of ready sale at 28@30 on arrival.

CHAS. F. MUTH.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 17@21c. Dark and second quality, 14@15c.; extracted white clover in kegs and barrels, 9@10c.; dark, 8c.

BEESWAX—Prime yellow, 27@29c.

H. K. & F. B. THURBER & CO.

CHICAGO.

HONEY—The market remains without change from that of last week. Dealers and retailers buy only enough to supply the demand for present use. It is impossible to place lots, or entire shipments, owing to the reluctance of dealers to buy in advance of immediate wants. Prices obtained for white comb in 1 lb. sections, 18@20c.; 1½ and 2 lb., 15@18c. according to beauty of same. Extracted honey, 8@10c. per lb., according to color, body and flavor.

BEESWAX—Yellow, 33c.; medium, 28@30c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—Market is well stocked with ordinary qualities. Inquiry for the same is not active. For fancy comb it is an easy matter to secure custom. White to extra white comb, 16@18c.; dark to good, 12@14c.; extracted, choice to extra white, 7½@8½; dark and candied, 6½@7c.

BEESWAX—Wholesale, 27@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Choice comb in light supply—fair demand and firm, at 15@17c.; dark, broken and poorly handled, dull at less. Strained and extracted steady at 6½@7¼c.; choice in fancy packages more.

BEESWAX—Better, at 28c. for prime.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY—Choice honey is in excellent demand now. Every lot received thus far in good order, has been sold on arrival; best 1 lb. sections bringing 18c. quickly, occasionally 19c.; 2 lb., 17c. with an occasional sale at 18. Second quality and broken lots are very hard to sell. Extracted honey not in demand.

BEESWAX—28c.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—Our market is very quiet on honey. We quote 16@18c. for best 2 lb. sections—18@20c. for best white 1 lb., and 10c. for extracted.

BEESWAX—We have none to quote.

BLAKE & RIPLEY, 57 Chatham Street.

KANSAS CITY, MO.

HONEY—Receipts of comb honey has been more liberal for the past week, but the demand still keeps everything that is of fair quality well cleaned up. Choice 1 and 2 lb. sections are taken on arrival at 18c.; larger sections and dark honey 16@17c. Sales of extracted for the past week, about 4,000 lbs., mostly at 8 cts. The feeling for extracted is a little better, and I look for a firmer market.

JEROME TWICHELL, 536 Delaware Street.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

CORRESPONDENCE

For the American Bee Journal.

Pollen—Now for the Facts.

G. M. DOOLITTLE.

For the past three years much has been said by the press and otherwise about pollen as being the agent of, if not the direct cause of our wintering troubles with bees. Most writers on the subject claiming that the eating of pollen was the cause of dysentery, for in order to become the cause, or an agent of, the bee must eat the pollen, as all will admit. In all of these discussions (which I have watched very closely) about the matter, I have failed to see any proof given that old bees *do* eat pollen.

After carefully reading all Mr. Heddon (who has been the main agitator of this question) has written on the subject, I fail to find anything which shows why he believes the theory he advocates, unless it be on page 283 of the Bee Journal for 1881, when he says, "I have not found a dead colony, where there was not plenty of bee-bread, showing signs of late work with it, or brood in all stages, and generally both, but nearly always brood." But it will be noticed he does not tell us what those signs were, or whether he saw the signs in the absence of brood.

On page 560, present volume of the Bee Journal, Mr. Kohnke is very positive about the matter, and says regarding dysentery: "If Mr. Heddon had omitted one word in his reply to Rev. L. L. Langstroth when he says, 'But they are sometimes compelled to eat it' (pollen), he would have given the sole and only reason for bees dying with it. Drop the word 'sometimes,' and you have the whole thing in a nut shell." Here, again, the reader will notice that no proof is given to support the assertion.

Since Mr. Heddon's article appeared on page 283 of the Bee Journal for 1881, I have tried several experiments to make old bees eat pollen when there was no brood in the hive, all of which have resulted in the starvation of the bees without a bit of pollen being consumed, as far as I could see. The first experiment I tried was this: I had a colony which had a queen which produced bees of a bad disposition, so much so that I did not care if they died. From these I took away all their honey as soon as they had ceased brood rearing (which was about Oct. 12), and substituted frames of pollen with little or no honey in them. The result was that as soon as they had consumed all the honey they had in their sacks, when I shook them from their combs of honey, and the little there was in the combs given them, they died. The pollen was carefully marked, and the combs examined every other day, as I wished to ascertain the facts in the case. As long as a cell containing a little honey could be seen, the bees were as active and lively as any bees, but soon after there was no honey to be seen, the bees became drowsy except in the centre of the cluster. In a few days those on the outside were apparently dead, having most of them dropped to the bottom board, or crawled into an empty cell where such could be found among the cells of pollen, while those in the centre of the cluster were sleepy as were those outside a few days previous. At this time the queen was still quite active with, perhaps, a dozen bees near her, but the most of the bees could hardly cling to the combs, while every available cell was filled with bees, too drowsy to back out upon being touched.

The next examination found them all apparently dead, but I succeeded in bringing a few to life by warming them and giving some honey as soon as they would take it. During all this process I could not discover that a particle of pollen was eaten, although I watched very closely. Many interesting facts were brought out, however, such as which bees succumbed first, that the queen was held precious to the last, and that bees could be brought to life after apparently dead, etc., but it would be out of place to dwell on them here.

Other experiments were tried "not unto death," but all to no avail as regards forcing the bees to eat pollen without the presence of brood. This fall I experimented, to see if it made any difference whether the pollen was covered with honey or not, giving a colony frames having a little patch of pollen covered with honey, all the rest of the honey being extracted from them. Although I held the bees to the experiment till I starved ⅔ of the colony, still none of the pollen was eaten. In no case did I ever know old bees to eat pollen except where brood was being reared. If pollen is used while brood is being reared, and at no other time, then the brood becomes the prime cause of dysentery (if dysentery is thus produced) and the pollen secondary. That old bees are kept from starving during times of scarcity in spring and summer by eating pollen when there is plenty of brood in the hive, I think I have abundant proof of, but in this case the old bees do not partake of the pollen, only as it is partially digested in the stomach of the nurse bees and formed into chyme, when it is fed to the old or field bees the same as it is fed to the larvæ.

By placing frames of pollen in hives containing no honey at such times, I have had the pollen rapidly consumed, and the bees kept lively, while those beside of them would eat up all their brood and starve as soon as the pollen was gone, unless fed. It may be possible that as soon as brood-rearing begins in the hive in the winter, that the old bees are fed pollen in this way, with plenty of honey in the hive, but I have my doubts about it. But if we admit this to be a fact, and that dysentery can be thus produced, then, as I said before, pollen can become only secondary as to producing dysentery.

From all the facts brought out by my experiments, I am convinced that pollen eating is not the cause of dysentery, and here venture the assertion that old bees will not eat pollen except as there is brood in the hive, and shall hold to it until it can be proven that they do.

Now, for the proof, gentlemen, and if you cannot furnish it, there is no need of dwelling upon the subject. We do not want any theories, or any guesses about it. Simply tell us just how you know that old bees eat pollen when the hives contain no brood, and if you prove they do, tell us also how you know that by eating it, dysentery is produced. I wish to here thank Mr. Corneil for his very clear and able article on page 557. He there gives us facts, which are of far greater import to the bee fraternity than a multitude of well-spun theories.

Borodino, N. Y., Nov. 13, 1883.

For the American Bee Journal.

Packing Honey for Shipment.

JEROME TWITCHELL.

I have a great many letters from all parts of the country asking how to pack honey for shipment, and for the benefit of all, I would like to make the following suggestions through the Bee Journal:

All honey-producers will, of course, know that in packing the sections in the case, they must be so arranged that the combs will not touch each other, nor touch the sides of the case, and that they must be wedged in, so that they are absolutely immovable by the ordinary jar of handling the cases.

I would recommend always the use of the paper pan in the bottom of the case, (heavy manilla paper folded at the corners in the form of a pan). It catches all drippings, and preserves the cleanliness of the case. The cases should be of clean new lumber, well fastened together with a panel of glass in one side any how, or even in two sides would be all the better, the glass serves the double purpose of revealing the contents to the handlers of it on the railroads, thereby making them more careful, and also affording the retail merchant a neat and convenient package from which to sell the honey.

Next, as to the size and shape of the cases. These should be as nearly uniform among all packers as possible, and I would suggest as follows, viz.: One-pound sections put 4 lengthwise and 6 across in a one-story case, or double in a two-story, making say about 20 pounds in one and 40 in the other. Two-pound sections, put 3 lengthwise and 4 across, making either one or two stories, and about 20 and 40 pounds in a case.

Larger sections than 20 pounds I do not recommend at all; so I have nothing to say about size of cases for them. Secure the lids with small nails, and not too many. There should always be hand-holds in the ends of the cases to insure the careful handling of them. Mark the weights on the end of case; never on top, as they become blurred. The net weights are not essential, but the weights of the cases or tare must always be plainly given.

In marking for shipping use a very small stencil or card. If the above suggestions are adopted, comb honey may be shipped any reasonable distance by freight with perfect safety, and will bring better prices and quicker returns than the usual slipshod cases in all sizes and shapes.

Kansas City, Mo., Nov. 17, 1883.

For the American Bee Journal.

Marshall County, Iowa, Convention.

The Marshall County Bee-Keepers' Association met at the Court House in Marshalltown, Iowa, Oct. 6. The Vice-President, G. W. Keeler, in the Chair. The minutes of the previous meeting were read and approved. Mr. C. A. Hasken and Mr. M. M. Fuller were received as members of the society.

The subject for discussion, "Fall and Winter Care," was then taken up.

Mr. Keeler stated that his bees are wintered in a cellar, but he made no fall preparation for them, more than to put them in when it turns cold. He puts one above another. So far he was very successful in wintering.

Mr. Hosken winters his bees in the cellar, and preferred it to out-door wintering.

J. W. Sanders, being called for, said that we should see that all were made ready for the winter, in the latter part of the honey season. This is done by seeing that all have plenty of young brood, late in the season, so as to go into winter with plenty of young bees. This can be done by placing empty combs in the centre, if the queen lacks room, owing to an overflow of honey, or by feeding, if there is a lack of honey in the fields. He thought that many colonies of bees were lost in the latter part of the winter and early in the spring for the want of plenty of young bees late in the season. For the life of a bee is short when on the wing, and if it has spent one-half or two-thirds of its life in the field, it will naturally die before another season comes in. Therefore, he advised to have plenty of young bees to take the place of the old, to prevent what is called "spring dwindling." Fix all up for winter after the honey season is over by contracting the size of the hive, with division-boards, so that only enough combs remain to be occupied by the bees. This will make less space for them to keep warm. I prefer two boards, one on each side. The extra combs can be placed away for use in the spring, as needed. If any colonies are short of stores, add to them by taking from those that has plenty and some to spare. He prefers a good quilt to a honey board, for a quilt allows the escape of the moisture and retains the heat of the bees. He had seen hives with honey boards damp and moldy, while in others, close by them, the quilts were dry, and the bees in prime condition. He made quilts from old worn-out clothing or carpets, or anything that will make a good warm quilt, the size of a honey-board. After all are thus prepared, let them remain until winter begins, then put them in the cellar, leaving the entrances open full width; place them a foot or more above the bottom of the cellar, with the back end of the hive, 2 or 3 inches higher than the front. Keep the cellar above the freezing point, say about 40° to 45° Fahr., and give them plenty of fresh air.

The following report was then made: Mr. Hasken had 15 colonies in the fall of 1882, 13 in the spring of 1883, and has 32 now (sold 2), and 300 lbs. of surplus comb honey; Mr. Fuller had 5 colonies in the fall of 1882, 4 in the spring of 1883, 12 now, and 100 lbs. of surplus comb honey; Mr. Keeler had 42 colonies in the fall of 1882, 37 in the spring of 1883, 62 now, 838 lbs. of surplus comb honey and 2,880 lbs. of extracted; Mr. Sanders had 11 colodies in the fall of 1882,11 in the spring of 1883, 25 now, 100 lbs. of surplus comb honey, and 350 lbs. of extracted; Mr. Brown had 2 colonies in the spring of 1883, and has 10 now, and 100 lbs. of surplus comb honey.

The subject for discussion at the next meeting, was "Promotion of Bee-Keeping."

The Secretary stated that the President of the Marshall County Agricultural Society requested all parties interested in bee-culture to meet with the Society at their January meeting, and assist in making out a programme for apiculture for the Fair of 1884.

The meeting then adjourned until the first Saturday in January, 1884, at the Court House in Marshalltown.

J. W. SANDERS, *Sec.*

For the American Bee Journal.

Conditions of Wintering.

J. E. POND, JR.

The question of frames is one that excites the ire, or arouses the sensibilities of many to such an extent that I propose to avoid it entirely in this article, and confine myself wholly to discussing the general conditions in which a colony must be placed in order to most safely withstand the inclemencies of a northern winter. In the first place I shall assume (and I confidently assume without fear of opposition) that the nearer our bees can be kept to a state of absolute quiet, the more successfully will they be enabled to withstand, not only excessive cold but sudden changes of temperature, both from warm to cold, and *vice versa*.

To attain this state or condition of things, has been the aim and object of scientific apiarists for many years, and in their efforts in this direction, many experiments have been tried, with more or less success, but in none of which have such positive results been achieved, as to absolutely warrant any one in asserting that an absolutely correct method has as yet been discovered. In theorizing on the subject, the various questions of ventilation, moisture, excess of heat, or want thereof, and various others considered of more or less importance have been discussed, but without as yet deciding anything satisfactorily, at least, the discussion still continues, and the experiments show that with all these points well fortified against, and also without any regard to any of them, bees live in some apiaries and die in others, no matter how much or how little care is taken in their protection. That this is so, proves conclusively that there is an error somewhere in our calculations, and that as yet we have not hit upon the right idea. I may be as wild in my opinions as any one, yet when I find that no matter what the conditions are, some apiaries are saved and some lost. I am emboldened to give my views publicity, and if nothing more comes of it, than to start discussions and experiments upon a new track, I shall have accomplished some little good, perhaps.

I am of the opinion that in our efforts so far, we have been laboring under the idea that bees need as much oxygen for their support, as we do ourselves, and our lack of success is caused by the incorrectness of that idea. As I stated in beginning, I believe that when we so prepare our bees that they will remain in a passive state, a state of nearly absolute quiet, an almost-dormant state, during the whole winter. No matter what changes of temperature may take place, then and then only shall we overcome the chief obstacle that exists to successful wintering. The fact that a hive of bees completely submerged under a snow-bank, during a long and changeable winter, will come out all right in the spring, is one strong proof in this direction.

This, I believe, is owing to the evenness of temperature which necessarily prevails where the colony is completely submerged in so bad a conductor of heat as a snow-bank certainly is. No heat can get in, and none can get out; but it is not owing to this alone, but to the fact that excess of oxygen is kept out also. Snow is sufficiently porous to admit of the passage of sufficient air to enable one to live, still it will not allow of any excess of air to pass through it.

Excess of oxygen will, as a matter of course, excite human life, why not our bees? Any exciting cause produces a bad effect on our bees, by starting them up from that state of quiet so absolutely necessary for their preservation, at a time when they cannot fly freely from the hive. Oxygen must be an exciting cause to our bees as well as to ourselves; now is it not a logical deduction, and one that is presumably correct, that if we contract the entrances to our hives, so as to give our bees the least possible quantity of oxygen necessary for their support, we shall aid more largely in keeping them quiet, than by giving tham a larger, and as some advise, as large an entrance as the width of the hive will allow? I ask the question in all honesty and sincerity, and desire an equally honest and sincere answer.

Foxboro, Mass., Nov. 19, 1883.

For the American Bee Journal.

Ohio State Convention.

The Ohio bee-keepers will hold their annual convention in Columbus, O., Jan. 14, 15 and 16, 1884. All interested in bee-culture are invited. The following subjects will be discussed; "How to winter bees successfully." "Are the new races of bees a success?" "What can we do to prevent adulteration of honey?" "How to create a home market for honey." "How many colonies can be kept in one locality?" "Can we do without separators?" "Which are best, deep or shallow frames?" "What shall we do with second swarms?" "How many brood frames are necessary in a hive?" "Which is the most salable section, one-half, one or two pounds?" "Is it advisable for all bee-keepers to adopt a standard size of frame?" "What is the most desirable width of sections?"

The above questions will be discussed by eminent men, such as Rev. L. L. Langstroth, Dr. Besse, S. D. Riegel and others, and in addition to the above, Prof. Lizenby, of the Ohio University, will deliver a lecture on "Honey-producing plants:" also Mrs. Jennie Culp will read an essay.

C. M. Kingsbury, *Sec.*

Hamilton, Ont., Convention.

The bee-keepers of Hamilton district met in Convention at the Dominion Hotel, on Saturday, Nov. 10.

Officers elected for the ensuing year: W. J. Whitfield, Dundas, President; R. L. Patterson, Lynden, Vice-President; A. Robertson, Carlisle, Secretary-Treasurer.

The discussion on the best means of wintering bees on summer stands, was well sustained. The plan received with most favor was to permit free circulation of air beneath the hives, provided the tops of the hives are air-tight.

A question was raised as to the best food for bees at the present time, when the apiary held insufficient stores. In reply, it was suggested to feed comb filled with honey, and if without that, to suspend frames in the hives filled with sugar candy.

W. J. Whitefield offered a prize of one colony of bees for the best means of wintering bees. The conditions of the competition are: Entrance of 50 cents, to be applied to a second and third prize; colonies to be entered at date; prize to be given to the one having the largest percentage of numbers entered in best working order, May 27, 1884. The prize winners will be expected to make a statement in writing, for publication, to the judges of the mode of packing, character of hive, size of frame, winter and spring management. The parties getting the bees to furnish Mr. Whitefield with hives not later than June 10, 1884, and to remove them when notified. Competition confined to Wentworth county. Messrs. Whitefield, Patterson and Knowles were appointed a committee to meet the directors of the Central Fair to arrange prize list, etc., for next year.

A committee was appointed to arrange for matters for discussion at the next meeting.

The Convention adjourned to meet again, April 12, 1884.

For the American Bee Journal.

Wintering Bees on Summer Stands.

J. F. LATHAM.

Wintering! yes; that is what we all—veteran, novice, specialist and amateur, are supposed to be thinking about at present; and admitting that nothing new can be added to the *modus operandi* pertaining thereto, I will wave the plea of originality—that not being the import of my caption—and as what I write embodies my very humble opinions concerning the requisites of a successful wintering preparation, I submit them for what they are worth.

CONDITION OF THE BEES.

Bees should be healthy and embody all the other requisites of good colonies. We do not want bees that are constitutionally predisposed to ailments, that are liable to develop a deranged secretion when subjected to the aggravating changes atmospheric, dietetic, etc., that they must necessarily submit to, from the time they cease outside activity in the fall until they resume it again in the following spring. As to quantity, I am not radical. If I do not have bees enough to occupy six frames of comb, I can put up with four. I have wintered colonies from small late swarms, that were not crowded on three frames as successfully, and received as good returns from them the season following as from others that were a hive-full, all doing well, comparatively. The latter extreme I would not advocate as a status of strength; accepting it as a condition, allowable only, when obliged to submit to a stress of circumstances. Large colonies lose more bees in wintering, in proportion to numbers, than quite small ones, if the small ones are properly cared for.

Could I be allowed to decide the strength of my colonies for wintering, those of medium size, covering about six combs would be my standard for selection. Such consume less stores, proportionately than large ones, exhale less moisture, are less liable to create an abnormal condition during confinement, and, conditions alike, they will swarm as early and cast as strong swarms! Giant colonies, with 30 pounds of stores, "are not to be frowned at," but when the same results can be accomplished by a minium, with two-thirds of the stores, and an extra five minute's care while preparing it for winter, the advantage to the bee-keepers seems to favor the latter. I would not divide the maximum, nor "double down" the minimum.

THE HIVE.

The kind of hive suitable to winter a colony of bees successfully, appears to be of less decided importance than is generally purported, but as the movable-comb hive only is admissible in bee talk, I will admit all kinds in general, with their accompanying sized frames, and venture the assertion that no style of hive will alone winter a colony of bees. One of my colonies has passed the three preceding winters in a box-hive in as good condition, excepting the loss of more bees, as those in the movable-comb hives, I caring for both alike.

POSITION OF THE CLUSTER.

As soon as possible, after the bees have done storing surplus, I commence to prepare them for winter; my first steps being to locate the cluster at one end of the brood-chamber on combs, ½ or ⅔ of the lower portion of which is composed largely of empty cells. I then prepare a passage for the bees over or through the combs, close up what space I deem necessary with well-filled combs of capped stores, ending, if required, with a division-board. If the space left, after removing empty combs, or those not needed, is quite large, I fill it with chaff. By the foregoing described arrangement, the cluster is not liable to get divided, and the bees can move *en masse* in the direction of their stores, as they are all above, or on one side of them.

STORES.

For food I supply new capped honey, or sugar syrup, fed during the month of September, and as early in that month as possible. After feeding, I inform myself of the status of each colony, by a thorough examination. I then arrange everything inside of the hive satisfactory, tuck the quilts down snugly, or screw down the honey boards, and let the bees propolize to their satisfaction. During the remaining days in which the bees can fly, I feed sugar candy over the brood-chamber, or outside. This final feeding I have found to operate admirably; it attracts no attention of robbers, and supplies the bees with an excellent food which they will consume in lieu of their winter stores, while they are making their natural preparations, after having their domicils disturbed by over-hauling in the fall, when there is no nectar in the fields.

PACKING.

As soon as the severe frosty nights give warning of winter's approach, I fill the caps of the hives with chaff and straw, about ⅔ chaff and the remainder straw, putting the chaff in first. I then put a few handfulls of straw on the quilts or honey-boards; put on the well-filled cap, and crowd all down as closely as possible.

This done, I surround the hive with a box having an opening in front. With a passage for the bees, and allowing them to become familiarized with their surroundings, I next pack chaff or straw around the backs and ends of the hives, leaving the fronts until steady cold weather demands further care—when all is completed by crowding the packing around the whole hive, about a foot in thickness.

To give a passage for air from outside, I bore two or more one-inch auger holes in front of the box, and high enough to prevent strong gusts from blowing directly into the entrance of the hive. A board closes the entrance to the box and completes the process.

UPWARD VENTILATION.

Unless the colony is above medium size, I give no ventilation over the brood-nest. If below the medium, I place a folded paper over the quilt, before crowding the cap down. When the colony is a large one, occupying eight of ten American or Gallup frames, I roll the quilt back, the distance of the space between combs, or bore three one-inch holes through the honey-board, at the end of the brood-chamber, opposite from the cluster, and cover the openings with a single thickness of burlap. To fecilitate the escape of moisture from the caps, I have a ¾ inch auger hole in each end. As the processes described in the foregoing embody the "seven requisites" of a safe wintering, I cannot make a better conclusion than by stating that, having tried them five winters, I have not "found them wanting."

Cumberland, Me., Nov. 12, 1883.

* * *

For the American Bee Journal.

Different Varieties of Bees.

W. Z. HUTCHINSON.

The most exhaustive, and, to my mind, the most impartial and best article upon the comparative merits of the Italian and German varieties of bees, appeared in the April and May numbers of *Gleanings* for 1881. It was from the pen of the Rev. L. L. Langstroth. As many of the present readers of the BEE JOURNAL probably have not seen the article in question, I hope I may be pardoned for quoting the decisions therein recorded:

1. When late forage is scarce, the Italians stop breeding much earlier than the blacks.

2. The Italians, unless stimulated by judicious feeding, do not resume breeding as early as the blacks.

3. The Italians are much more inclined to build drone comb than the blacks.

4. The blacks are more ready than the Italians to work in surplus honey receptacles not closely connected with the main hive.

5. The comb honey made by the blacks from light-colored supplies, is usually more attractive than that stored from the same sources by the Italians.

6. With a queen of the current year, the blacks will hardly ever swarm, while, long after the usual swarming season, young Italian queens will often lead off swarms.

7. Black bees are much more sensibly affected by the loss of their queen than the Italians.

8. In building, an Italian colony seldom begins as many combs as the blacks, and, therefore, work them more compactly, squaring them out, as it were, as they proceed.

9. Black bees will readily build between guide frames, worker combs, while it is very difficult to get any satifactory result, in this line, from Italians.

10. The Italians, both young and old, adhere with much tenacity to their combs when they are lifted from the hive, while the blacks, more especially those newly hatched, tumble off so readily as to annoy the operator by crawling up his clothes, or exposing themselves to be trodden upon.

11. When the hive is opened, the Italian queen and workers are disposed to remain quiet, and when they are lifted out, the workers spread themselves over the combs.

12. Under adverse circumstances, the blacks are far more easily discouraged than the Italians.

13. The Italians, will, in some seasons, from the second crop of red clover, build new combs, and store them with honey, when black colonies, in the same apiary, are losing weight.

14. Italians suffer little, when compared with the blacks, from the ravages of the bee moth.

15. Italians are far less likely than the blacks to rob or be robbed.

16. The Italians, by their superior energy and greater length of proboscis, will, on an average of seasons, gather much larger stores of honey than the blacks.

After each of the above propositions Mr. Langstroth proceeded to enlarge, illustrate, explain, and go into details as only Mr. Langstroth can, and any one who cares a fig about the matter should send for the papers containing the article.

It will be seen that each of the above varieties possess superior qualities not possessed by the other, and that, upon a summing up, the Italians come out ahead, and for the production of extracted honey, they have no superior. It will also be seen that, for the production of comb honey, the German variety has some characteristics that cannot be successfully ignored. Now, if we can have a strain of bees possessing the good qualities of both races, with the undesirable traits left out, would it not be an upward step? Mr. Heddon asserts that by a judicious crossing of these two varieties, and a careful selection in breeding, he has obtained such a strain.; and so well satisfied am I of the truthfulness of this assertion that I commenced, the past season, to stock my apiary with the "Heddon strain." I arrived at this conclusion from an actual trial of the bees. I am well aware that all over this broad land there is a genuine and worthy love for the Italians. I have felt this love, and know what it is, and only those who have "been there" know with what reluctance and real "heart aches" I give up the pure Italians,but self-interest compels me to.

With the Syrians my experience has been short and bitter—they are so irritable. It will be remembered that at the Northwestern Convention, a gathering that "represented the largest number of large, practical, successful honey-producers," that Mr. Langstroth had ever seen, the inquiry was twice repeated before any one could be found who had gentle Syrians, and then only one person was found, and he only knew that he had bought a selected, tested queen of a reliable dealer; the bees had the same appearance as the Italians. Somebody at the Northwestern Convention remarked that the Syrians had no good qualities not possessed by the Italians, while they had the unpleasant one of extreme irritability. But their admirers tell us that, if we will handle them properly, they will be gentle, and I presume they tell the truth, but who wishes to be obliged to approach the hive upon tip-toe, very slowly remove the cover, then sit down and wait for the bees to become accustomed to admission of the light, and then handle the frames so carefully that there is not the least jar? I will tell you who it is; it is the man who is not dependent upon bee-keeping for his bread and butter, but not the man who raises honey to support his family, and to whom minutes, at some times, may almost be dollars. I am heartily sick of that old saw. "If you will only handle them carefully, they are all right." No doubt of it, but we want bees that we do not have to handle with care; there are times when rapid manipulation, and a little thumping of frames, is absolutely necessary. The next count against the Syrians is, that they do not properly ripen and seal their honey. They are something like the Egyptian bees, whose honey sometimes looks very much like honey which has "sweated" from being kept in a damp place. I am aware that this complaint against them is not universal, but some of our largest producers have discarded the Syrians, and this point was one of the principal ones that influenced them in their decision. "Yes," says one, "but what have you to say to their wonderful prolificness, you do not doubt that do you?" No, I do not doubt it, but I dislike it; in my estimation it is a fault, and a very undesirable one at that. As some one said, at the last meeting of the Michigan State Association, "They will rear brood as long as a drop of honey remains in the hive." Is this a desirable quality? Their propensity to rear large quantities of brood at all times, and to build large numbers of queen-cells, just suits the queen breeder and the bees-by-the-pound man, but does it please the honey-producers? It is quality of bees that suits them, not quantity.

As A. R. Kohnke says, on page 560, "The prolificness of queens and the industry of colonies do not necessarily go together." We prefer bees that fill their hives with honey and then stop breeding (if the honey flow stops), to those that gather honey only to rear more bees that these bees may gather more honey to rear more bees. In other words, bees, not honey, is the great object aimed at by the Syrians; their philoprogenitiveness is greater than their acquistiveness.

But, says another, "If they breed late in the season, they go into winter with a hive full of young bees." True, again, but this is an undesirable state of affairs; and if this article were not already too long, I would demonstrate the fact; as it is, I will simply point to the fact that the Syrians die in winter just the same as other bees. But I will accord to the Syrians one good quality, and that is, they can be shaken from the combs "like shot from a shovel." To the gentleman of leisure this may not be an advantage, but to the man with aching back and arms, who shakes off a barrel or more of bees per day, this quality is quite an object.

Rogersville, Mich., Nov. 12, 1883.

CORRECTION.—In my article on page 594, third line from the bottom, "A thin strip of *bear* comb" should read: "A thin strip of *brace* comb." The same mistake occurs in the 36th line from the bottom. In the second column, same page, 25th line from the top, "stay" should read *stage*.—W.Z.H.

Prairie Farmer.

Bee Fever, Selling Honey, etc.

MRS. L. HARRISON.

Bee-keepers, as a class, are very enthusiastic in their calling, and, as the science is continually advancing in the way of new discoveries and appliances, this tends to keep them so. All students of the profession have to be acclimated, as it were, for all beginners, whether young or old, are sure to be attacked by a malady known to veterans as "bee-fever." Some persons are subject to occasional returns of it, during their natural life, while others get entirely cured.

We love to call to mind our own experience with it. A minister, who combined bee-culture with preaching, seeing how badly we were affected, kindly laid his hand on our shoulder, saying, "Take care, take care, Sister Harrison; you are getting the bee-fever too bad." Poor soul, we have it yet, and are likely to have it as long as we are an inhabitant of a land of flowers and sunshine. Our partner in the sweets and stings often remarks, "If I ever get to heaven, I expect to see you coming around with a bee-hat on."

The best known remedies for this fever, are losses by wintering, poor honey seasons, and an unreliable market. Losses by wintering have become obsolete in the hands of a few skillful bee-masters, and they reap returns, even in a poor season, by an intelligent use of the extractor whenever a flow of nectar occurs for a day or two, and yet they fail to obtain "tip-top" prices for the product.

Novelties in the way of labels are the fashion now, its advocates claiming that in order to sell honey, it must be pleasing to the eye, look attractive, and be adorned with bees, flowers, and streamers gay. While it is true that goods should be attractive to sell well, there is a limit to adornment. Bolts of muslin are adorned with pretty lithographs of pearls, grapes, etc., but what sensible house-wife examines these when she is seeking a good fabric for wear. She may say they are pretty, but then she directs her attention to the goods, holds it up to the light, examines the threads with a magnifying glass, and looks for the name of the mills. If we were wishing to purchase a package of honey to-day, in the market of Cincinnati, it would not be a novelty in the way of a label that we should seek, but the name upon it. C. F. Muth, of that city, has sold more honey than any person living, and it has not been by his labels either, but by putting upon the market pure unadulterated goods under their own name. Buckwheat honey is not sold as white clover, nor dog-fennel as linden. Mr. Muth has so educated his producers that they keep each kind separate and intact, and that enables him to call each by its Christian name. Where to-day are the dealers who, a few years ago, flooded the West with beautiful glass packages of pure glucose, adulterated with a piece of comb honey swimming in it, and labeled White Clover in gold letters? Are they to be seen adorning the shelves of grocerymen, with their gold-embossed labels? Bee-keepers do not need a monkey and hand-organ to attract attention, but their name stamped upon the white wood of the package of comb honey, or upon the keg, can, or barrel of extracted.

Honey that is shipped to cities is produced almost entirely in one and two pound packages, and shipped in crates with glazed sides. We lately saw one of these pretty crates in a grocer's window, and thought "beauty unadorned is adorned the most." Would it cater to the wants of the consumer if the white wood of these packages was covered with gayly tinted paper? Does he want to pay for it? Some one must, for it will come out of some person's pocket-book. These crates should be graded, and the same in the middle as shown next to the glass, and have the producer's name stamped on each one. A producer who has a reputation to maintain, will not be likely to put in the center of a crate stamped packages that are black in the center from being used as cradles for a generation of bees, and then filled in the fall with the juice from apple and sorghum mills, and honey from frosted buckwheat fields.

White clover honey has no superior, and should be graded as such, but linden, goldenrod, buckwheat, etc., are produced and relished by many, and should be graded and sold under their own name. A home market is necessary, in order to keep bees for profit, and if the producer has none, he should make one. Milk routes have a money value, and are sold according to their merits, and honey routes will have a pecuniary value when they are better understood.

We have noticed that when a family eats honey at all, considerable is consumed; while another family cannot be persuaded to buy a pound. Some bee-keepers canvass their own neighborhood, and leave a small package at each house, and build up a trade in this way. All undesirable lots can be worked off at home and better prices obtained for it, than by shipping to distant cities.

Bee-keepers, as a class, have a mania for shipping to large centers, and the business has been injured in that way, as honey is sold there for less than in small towns. We have known of grocers in adjoining towns ordering honey from here, when we knew of producers near them that should have supplied them, and saved transportation.

Peoria, Ills.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Feeding Bees in Winter, etc.

1. What is the best way to feed our bees in winter, when we have them in a cellar, and know they have not enough to keep them through until spring? Many that were late swarms in this section, will be short of stores where they have not been replenished from stronger colonies; and, unless fed some during the winter, many colonies will starve. There was only enough fall honey to keep up a good brood.

2. Will the division-board feeder, as described in Prof. Cook's work, do for a winter feeder, or would it be best to feed from cups covered with cloth, bottom upwards, and placed over the frames? Please state the best and safest way, and oblige many, who from necessity or neglect, have deferred this great necessity until now.

J. W. SANDERS.

Le Grand, Iowa, Nov. 16, 1883.

ANSWERS.—1. I have never yet been able to feed bees in winter, or at any time, when they could not fly for a considerable length of time, to my satisfaction.

2. I have never tried Prof. Cook's feeder above referred to, but from my experience with those working upon the same principle, I should not dare to depend upon it nor the cups covered with cloth. A good feeder should combine the following qualities: It should not leak a drop, whether the bees desert it or not. It should not daub the bees. It should not waste heat, nor excite robbing. The great trouble with all feeders, with cloth attached, is that they do not hold the feed, when from cold or any other reason the bees abandon it for a time, then daubing and robbing follow. It is best to do all feeding necessary before the bees cease flying, but in your case I should use one of the three feeders I have devised, called a "Winter feeder." It differs from the other two I use, inasmuch as

the opening is very large, and the feeder very shallow. If the feed consists of pure cane sugar syrup, the bees will take it down to the combs in winter, if in the cellar and the feeder covered warm.

Moving Bees, etc.

Please answer the following questions through the BEE JOURNAL:

1. Can I, without loss, put my bees in a new yard (adjoining the old one) in the spring, when I take them out of the cellar, and what precautions will have to be taken.

2. Can extracted honey be shipped in barrels without waxing the same, and if they are waxed, how much wax will be required? M. E. DARBY.

Dexter, Iowa, Nov. 10, 1883.

ANSWERS.—1. Certainly you can, and that, too, without any precaution, nine times out of ten, though it will be well to remove all land-marks from the old apiary that you can conveniently, and place a board partially in front of the hives, but so as not to shade the entrances when you put them out for their first flight.

2. My experience in waxing barrels is that the wax costs as much or more than the barrel, and is not needed at all. A good wooden-hooped pork barrel, made tight by a good workman, will hold honey nicely. Mrs. Spades, the ex-lady honey dealer of Chicago and New York, told me that she was convinced that wooden-hooped barrels would hold honey better than those iron-bound. I, at once, changed to the cheaper barrel, and found her opinion correct in my case. Before filling a barrel. I always see that the hoops are driven tightly, and the outside ones nailed; the "outside" in each group. Pour in a gallon of hot water, and shake until it saturates each part. Pour out, then weigh the tare, and fill with honey, and weigh and mark all on the head of the barrel, and you are ready for an unexpected order.

☞ A meeting of the bee-keepers of Des Moines Co., Iowa, will be held on the second Tuesday in January, at 10 a. m., for the purpose of organizing a county bee-kepers' association, at Middleton, Iowa, in R. C. Crawford's Hall. JOHN NAU, FRANK MELCHER, A. M. BALDWIN, W. R. GLANDON, *Committee.*

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

SELECTIONS FROM OUR LETTER BOX

Seed of an Aster.

I enclose a package of seed that I obtained from a plant that is making its appearance here. It grows from one to three feet high, and blooms from the middle of August until frost kills it. The flowers are small; the outside being white and the centre yellow. The flowers look very much like the flowers of the May weed. The plant is very hardy, increases rapidly, and stands drouth better than other honey plants, and appears to stand next to sweet clover for secreting nectar. Sow the seed almost any place in the spring, and the plant will be apt to take care of itself; it is very hardy and will not winter-kill. M. MILLER.

Scott Co., Iowa, Nov. 12, 1883.

[The plant is evidently an aster, but from the seed alone, nothing very certain can be said of it. Seed will be sown and report made, if favorable, next year.—T. J. BURRILL.]

No Fall Honey.

We had an exceptionally bad season in our immediate neighborhood. April opened, promising fine weather, but soon the cold set in, and in connection with raw winds, increased my winter losses to about 80 per cent. We had a very fine stand of white clover, but the bees did not gather any surplus until the latter part of July, and then it lasted but a few weeks. There was no fall honey. I received about 70 pounds of mostly extracted honey, per colony, spring count; but they are pretty well supplied with stores of white clover and Alsike honey. G. E. T. KYBER.

Green Bay, Wis., Nov. 19, 1883.

No Surplus Honey.

The season of 1883, for bees in this section, has been a peculiar one. The spring opened very favorably, but May was so very wet and cold that the bees could not gather enough for brood-rearing. June was somewhat more favorable, then swarming commenced, and, by the time that was over, the drouth was here with cold nights; during August, on account of the cold nights and dry weather, no buckwheat honey of any account was stored, and the early frost in September cut all prospect for surplus out of the question. I do not think there was one pound of surplus, when last season there were ten pounds. Bees are now in winter quarters with honey enough, but weak in bees, and we are having a perfect blizzard here; it is already 18° above zero, and the wind blowing a perfect hurricane. Bees unprotected will suffer from this cold snap. I got but little surplus on account of selling nuclei, and using my bees for queen-rearing. H. H. BROWN.

Light Street, Pa., Nov. 15, 1883.

Early Frost Cut off the Fall Bloom.

I commenced the season with 42 colonies; 5 were rather weak, and owing to the cold wet spring, they were all rather weak, when the white clover came. I extracted 4,000 pounds of extra fine honey; and increased to 80. The frost came early and cut off the fall honey. I sold one, and have the rest in the cellar (all Italians). JOHN DEWAR.

Tiverton, Ont., Nov. 17, 1883,

Cellar Wintering of Bees.

In the fall of 1882, my 23 colonies were stored for winter, viz.: Seven were packed in chaff on the summer stands, and 16 were put in the cellar. They wintered well, and had plenty of honey left. I kept the cellar at a temperature of 35° to 45°. In one instance the thermometer fell to 32°, on which occasion the bees became very restless. Thinking the weather would continue cold for some time, I began to warm the cellar, by putting a bucket full of live coals on the cellar floor, several times a day. I noticed a great deal of dampness, and after using the coals, this dampness was removed, and the bees became quiet again. Before this was done, the moment the bees heard a noise, when we entered the cellar, they began to fly out and stir up things lively. In regulating the cellar, as above stated, I think bees will winter every time. I have 60 colonies packed into the cellar this winter. I began the spring of 1883 with 23 colonies; increased to 70; obtained 1,055 pounds of extracted, and 1,075 pounds of comb honey; in all 2,130 pounds; and average of 93 pounds per colony, spring count. My best colony, Cyprian, yielded 212 pounds of extracted honey. The fall season was rather poor; the bees did not do much after July 15, on account of dry weather. JOHN NEBEL.

High Hill, Mo., Nov. 19, 1883.

Foul Brood.

Several packages of discolored bee-comb have been received in response to request. All except one are found to contain the same micro-organism. The exceptional one I do not know who sent; but it came in a piece of pine, and with a bored inch hole, and outside made octagonal. A few cells of the comb were wrapped in a strip of muslin, and put into the place provided in the piece of pine wood. In this specimen nothing of a living character has been found. Another specimen, sent in a stout paste-board box about 2¼ by 3 inches, and labeled "Cobalt" was accompanied by a letter which I am sorry to say has been misplaced without reply. The indications are that in this latter there is genuine foul brood. Should be pleased to know again the correspondent sending the specimen. So far there is nothing to indicate a difference between so-called malignant and mild types of the disease. Private replies have been sent to most of the receipts, but I here return many thanks for the specimens sent. T. J. BURRILL.

Champaign, Ill., Nov. 17, 1883.

Bee-Keepers Produce the Beeswax.

They are now the greatest consumers of this one of their own production. In getting their wax to the foundation mills and back home, does it pay them to have the grocer, peddler, commission merchant and general dealer in wax, etc., each take a margin out of them? Just think the matter over, and form correct conclusions. JAMES HEDDON.

Dowagiac, Mich., Nov. 17, 1883.

Poor Season for Bees.

This has been a poor season for bees here. We have had only a quarter of a crop of honey, and very little increase. It was so very dry that bees could get no nectar. Enclosed I send a plant on which bees work every morning. What is it? G. HILLJIE.

Sohnlenburg, Tex., Nov. 17, 1883.

[It is figwort, or the Simpson honey plant.—ED.]

Strange Bees.

A negro man lately came to me and asked me to buy a bee tree he had found, near my house. I bought the tree for 50 cents, and went to cut it. As bees had done so poorly, and had so little honey, I thought the combs would not break down, but every comb broke down, being so full of honey, and, to my astonishment, I noticed they were a strange kind of bees, being larger than the common bee, and having one and two yellow bands around their bodies, and had between 30 or 40 lbs. of honey; nearly twice as much as my home colonies have. I put them in a clean hive, and I am feeding the honey back to them for winter. They must be splendid honey-gatherers to get so much in such a year as this. They were no nearer the swamp than my bees. I know that bees have gathered all their honey from the swamp, this year. W. S. DOUGLASS.

Lexington, Tex., Nov. 10, 1883.

Explanation, and Report for 1883.

On page 548, of the present volume, you will see that I obtained 75,000 pounds of honey from 60 colonies of bees, spring count. That is a mistake, omit one cipher and you will have the correct amount. That Dr. J. C. Thom, of Streetsville, Ont., on page 563 of the present volume, did not understand how that was done, is no wonder. I can only say it was done, by adding a cipher. I will give my brief report for the season, just passed. After coming through the spring, by loss and selling, I found myself the possessor of 60 colonies of bees, most of which were in good condition. By the last of May, some of the hives were filled with bees to overflowing, and ready to swarm. Not being in favor of swarms on fruit blossoms, I commenced to equalize them by taking from the strong and giving to the weak; in this way I kept back swarming until June 15, when out came four swarms, followed by from one to five swarms a day, until June 28, when I made what swarms I thought best by dividing. July 4 found me with 100 colonies, 90 of which were given sections, and 10 prepared for extracted honey (4 new and 6 old). The bees worked hard on clover, but the nectar was very thin) and they did not gain very fast. On July 20, basswood blossomed, and then the bees worked early and late, rain or shine, for 24 days, when all was over; after which they hardly got as much as they consumed. Sept. 1, honey all taken. I find that I have 2,500 two-pound solid sections of white honey, and 2,500 pounds of extracted, making a total of 7,500 pounds of honey from 60 colonies in the spring. This fall, I made by doubling my nuclei, 6 more. So that now, in all, I have 106 colonies in good condition, packed in chaff for winter.

J. H. KENNEDY.

Little York, N. Y., Nov. 19, 1883.

My Report for 1883.

As I did not make a spring report, perhaps it would not be out of place now. The first of June found me with 30 fair colonies, out of the 45 put in the cellar on Nov. 20, 1882. The second day of March was the only day between Nov. 20 and April 5 that the bees could fly. At that time every colony I had was suffering badly from dysentery, and a number of them were dead. As the day was warm and pleasant, I set them all out, and such a mess! In a few minutes the snow was completely discolored, and you could smell it 10 or 15 rods from the yard. After an hour's flight, I began feeding them sugar-syrup, which I prepared and warmed by tipping up the front of the hive and pouring it in at the entrance, giving each colony 5 lbs. of syrup, which was all taken up before I set them in, in the evening. I saw no more of the disease during the rest of the winter. I set them out on April 5. Now for the results of my season's work: I took 2,000 lbs. of comb honey, in two-pound sections, and 1,250 lbs. extracted; all from the Alsike clover and basswood. I increased to 56. The honey is mostly sold in my home market, at 15 and 20 cents per pound. My queens are all bred from Mr. Doolittle's best strain.

WM. BERRYMAN.

Geneva, N. Y., Nov. 18, 1883.

My Surplus Arrangement.

I have been a reader of the BEE JOURNAL for one year, and think every one that keeps bees should have it, for it will more than pay. I see that most of the bee men use a case to hold sections. Some say I have *the* case, and no doubt of it; others seem to doubt it considerably. I do not use a case at all, nor separators either, and I have not had enough crooked or bulged sections for table use, this season. I do not say that I have the best surplus arrangement in existence, but one that is cheap, and any one can test it for themselves. I use a slot honey-board, Langstroth hive, and one-pound sections. The honey-board prevents the bees from gluing the outside of the section, except at the entrances. I place seven sections in a row. I have glass cut the size I use, 4¼x4¼; I place one at each end of the row; then take a common rubber band or cord and stretch it around a row of sections and glass, and you have the arrangement complete. I use four rows or 28 sections for one tier, and I tier them up 2, 3, and 4 high, using 112 sections on a hive at once, if needed. Bee men from several counties have visited my apiary this season, and all like the arrangement first rate, and went home and tried it. One said, "It is the nicest thing I have ever tried." Another said, "I will never use another case, as long as I keep bees."

FRANK E. THOMPSON.

Tiskilwa, Ill., Nov. 16, 1883.

From 8 to 20, and 500 lbs. Comb Honey.

I commenced the season with 8 colonies of black bees; increased to 20, and got 500 lbs. of comb honey in two-pound sections; for which I found ready sale at from 15 to 18 cents per pound, near home, and could have disposed of much more at the same price, if I had it to sell. I procured a tested Italian queen from Henry Alley; introduced her early in July, and Italianized one-half my colonies later in the season. J. A. BLACK.

Pleasant Mound, Ill., Nov. 19, 1883.

A Question for Mr. Stewart.

On page 576 of the BEE JOURNAL, is a very interesting article by Mr. W. H. Stewart, entitled, "Shall we Clip our Queens' Wings?" at the close of which he says: "If I were offering queens for sale as superior stock, I would compel the brood mothers to fly often, even if I had to toss them up to give them a start." I wish to ask him a question to illustrate the matter in a different light. Suppose that he had a brood mare from which he wished to rear colts noted for speed, would he consider it necessary or advisable, during foal, that she be driven at a high rate of speed, with a view of transmitting that quality to the offspring? W. N. HOWARD.

Derby, Vt., Nov. 19, 1883.

The Michigan Convention.

DEAR MR. EDITOR:—May I ask you to call special attention to our next annual meeting to be held in Flint, Dec. 5 and 6, of the Michigan Bee-Keepers' Association. We expect to have by far the best meeting ever held in the State. It is expected that the Rev. L. L. Langstroth will be present. To see and hear him will pay any one for the trouble and expense incident to the journey. We also expect D. A. Jones, A. I. Root, C. F. Muth, and hope to have C. C. Miller and T. G. Newman. From what I hear, Michigan bee-keepers are to be out in force. Hotel rates are to be $1.00 a day. Further particulars as to programme, will be given soon. We expect to get reduced rates on the railroads. To aid in this, and that I may know how many certificates on railroads to ask for, will every one in this or other States who expect to come, drop me a card at once to that effect?

A. J. COOK, *President.*

[Sorry we cannot attend.—ED.]

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

◆

How to Create a Market for Honey.

We have now published another edition of the pamphlet on "Honey as Food and Medicine," with more *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy **5** cents, postpaid; per dozen, **40** cents; per hundred, **$2.50**. **500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit. Try it, and you will be surprised.

◆

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a statement of account every week.

Our New List of Premiums.

Getting up Clubs for 1884.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

For a club of $20, for 10 Weeklies, or an equivalent in Monthlies, we will present, besides the 15 per cent. in books, a tested Italian queen, by mail. postpaid.

Announcements for larger clubs will be made hereafter.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

◆

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

◆

Bee Pasturage a Necessity.—We have issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for ten cents.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

A Chance for Fun.—The "latest thing out" in the way of something to afford home amusement for winter evenings, or a side show for church fairs, consists of a sort of Magic Lantern that does not require pictures on glass. The Polyopticon, as it is called, because it will show up so many different things, makes use of ordinary newspaper pictures, family photographs, chromo cards, home-made sketches, etc., and thus affords a new use for the collections of pretty cards, which so many have been industriously making. Though patented, it can be made and sold at one-fourth the price of a good Magic Lantern.

Descriptive circulars can be obtained of the Murray Hill Publishing Co., 129 East 28th St., New York City.

◆

☞ It would be a great convenience to us, if those sending us Postal Notes or Money Orders, would get the issuing Post-master to make them payable at the "Madison Street Station, Chicago, Ill.," instead of simply "Chicago." If they are drawn on Chicago, they go to the general office, and we have to make a trip of six miles to get them cashed; but if they are drawn on the Station as above, it is only a few steps from our office. When sending us money, if you will please remember this, you will much oblige the publisher.

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra

◆

☞ We need the numbers of the BEE JOURNAL for August, 1866, and April, 1876. Any one having them to spare, are requested to send us a Postal Card. We will give 25 cents for each. Do not send them without writing, for we want only *one* of each; and, if we are not already supplied, we will take them.

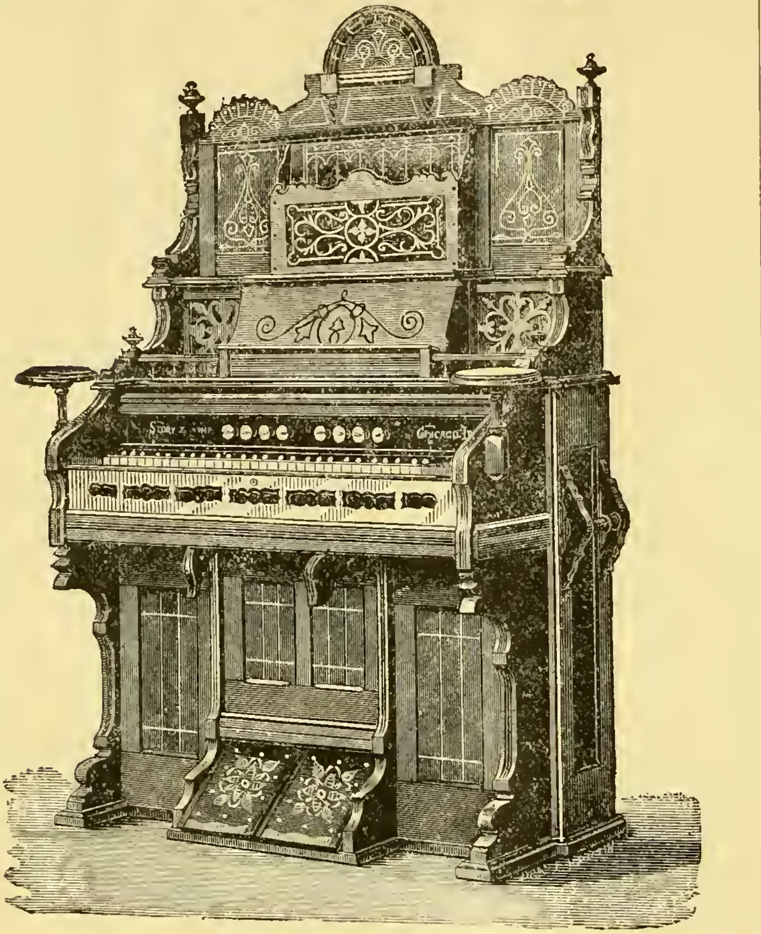
◆

☞ Speak a word for the BEE JOURNAL to neighbors who keep bees, and send on *at least one new* subscription with your own? Our premium, "Bees and Honey," in cloth, for one *new* subscriber to the Weekly, or two for the Monthly, besides your own subscription to either edition, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

◆

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

SPECIAL PREMIUM!



Five Octaves, four sets of Reeds of two and one-half octaves each, eight hand and two knee stops, as follows:

DIAPASON. MELODIA. VIOLA.
CELESTE. ECHO HORN. DULCET.
TREBLE FORT, BASS FORTE, KNEE SWELL,
GRAND ORGAN.

Height, 5 feet 11 inches; width, 4 feet 2 inches; depth, 2 feet; weight, boxed, 350 lbs. This Organ is unexcelled for purity of tone, durability and beauty, and is fully warranted for five years.

☞ This Organ will be shipped to the order of any person sending us a Club of **One Hundred Subscribers** to the Weekly Bee Journal, accompanied by **$200.00 Cash,** or its equivalent of Monthly and Weekly Subscriptions combined.

This liberal offer will remain open until June 1, 1884, and presents a fine opportunity to energetic persons to secure a handsome Organ without cost.

Subscriptions and remittances may be sent in at any time, and will be credited to this Premium, when so stated.

FOR SALE.

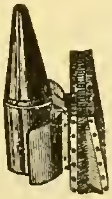
Barnes' Combined Foot-Power Saw,

Gig Saw, 2 Mandrels, 2 Emery Wheels, 3 Cutter Heads. Total cost, $52.00. I will sell at 40 per cent. discount. Also one Mandrel, for power, $5.

V. W. KEENEY,
48A2t SHIRLAND, ILL.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
32ABtf J. VANDERVORT, Lacyville, Pa.



BINGHAM SMOKERS.

I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including THE CONQUEROR, and THE DOCTOR.

Send for my 32-page Illustrated Catalogue of Bee-Keepers' Supplies of every description.

ALFRED H. NEWMAN,
923 W. Madison, CHICAGO, ILL.

SAMPLE SECTION RACKS.—In answer to many inquiries, I will furnish samples of the section rack I use for 75c. T. E. TURNER, Sussex, Wis.

A NEW HIVE.

Arranged for continuous combs and continuous passage-ways. Will be found a pleasure to work with, and can be easily and rapidly managed. For comb honey it is without a rival, and as an invention, is second only to that of movable brood frames.

Guaranteed to Give Satisfaction.

SEND FOR PRICE LIST AND CIRCULAR.

Address, **DR. G. L. TINKER,**
44Atf NEW PHILADELPHIA, O.

DR. FOOTE'S

HAND BOOK OF HEALTH,

Hints and Ready Recipes.

Is the title of a very valuable book that gives a great amount of information of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

It Costs only TWENTY-FIVE CENTS, and contains **28** pages, **and is sent by mail, post-paid, on receipt of price.** This is just the Book that every family should have.

IT TELLS ABOUT

What to Eat,
How to Eat it,
Things to Do,
Things to Avoid,
Perils of Summer,
How to Breathe,
Overheating Houses,
Ventilation,
Influence of Plants,
Occupation for Invalids,
Superfluous Hair,
Restoring the Drowned,
Preventing Near-Sightedness,
Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear,
How much to Wear,
Contagious Diseases,
How to Avoid them,
Exercise,
Care of Teeth,
After-Dinner Naps,
Headache, cause & cure,
Malarial Affections,
Croup—to Prevent.

IT TELLS HOW TO CURE

Black Eyes, Boils, Burns, Chilblains, Cold Feet, Corns, Coughs, Cholera, Diarrhœa, Diphthera, Dysentery, Dandruff, Dyspepsia, Ear Ache, Felons, Fetid Feet, Freckles, Headache, Hiccough, Hives, Hoarseness, Itching, Inflamed Breasts, Ivy Poisoning, Moles, Pimples, Piles, Rheumatism, Ringworm, Snoring, Stammering, Sore Eyes, Sore Mouth, Sore Nipples, Sore Throat, Sunstroke, Stings and Insect Bites, Sweating Feet, Toothache, Ulcers, Warts, Whooping Cough, Worms in Children.

It will Save Doctor Bills!

Price only **25** Cents. Sent by Mail, post-paid, by

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

THE YOUNG SCIENTIST.

A Practical Journal for Amateurs.

Tells about work of all kinds for Boys and Girls—Lathes, Scroll Saws, Microscopes, Telescopes, Boats, Athletic Sports, Experiments, Pets, Bees, Poultry, etc., etc. Finely Illustrated.

$1.00 per year. Specimens Free.

The following Books are **New, Thorough, Reliable and Cheap.** They contain as much matter as most of the books which sell at $2.50 and $5.00.

Practical Carpentry. By F. T. Hodgson. Over 300 Illustrations. The best book on the subject ever issued..........	$1.00
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Any of the above Mailed Free on Receipt of Price. *Send for Large Descriptive Catalogue.*

INDUSTRIAL PUBLICATION CO.,
48A6t **294 Broadway, New York.**

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XIX. CHICAGO, ILL., DECEMBER 5, 1883. No. 49.

OLDEST BEE PAPER IN AMERICA — THE AMERICAN BEE JOURNAL — ESTABLISHED IN 1861

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR,

Northwestern Convention—Hints.

We have received the following letter from Mrs. L. Harrison, the Vice-President of the Northwestern Bee-Keepers' Society, offering a few hints concerning the next Convention:

DR. NEWMAN.—*Dear Sir:* I feel as though I was indebted to you for the pleasure and profit derived from the late Northwestern Convention, The air of the hall, at one time during the first day, became so impure that I was obliged to leave the room, and I thought, as I had seen Mr. Langstroth, I would take the first train for home, and say nothing about it, as I would only be laughed at, and called hystericy if I did. You then opened the windows, and relief came.

It must be apparent to you, as well as others, that after discussions have been prolonged from an-hour-and-a-half to two-hours, that the audience becomes dull and lifeless, but if a recess of 15 minutes occurs, and the door is opened, which forms an excellent draught, the hall is cleared of impure air; and when business is again resumed, all engage in it with a keen zest. On the second day of the Convention, the air was as pure in the hall as it was out of doors.

Permit me to say to those who were not in atttendance, that they missed a rare treat, by not being there. All present seemed to have come to get and impart information, and a universal good-fellowship prevailed. More ladies were present than at any Bee Convention I ever attended; and it is to be hoped that all those who were not able to bring their wives and daughters with them this year, will keep a few more bees another season, for the express purpose of paying their expenses to the re-union of 1884.

When we are having blanks printed—for to save time in the election of officers—would it not be well, to have some printed for statistics?

LUCINDA HARRISON.

Peoria, Ill.

The points made by Mrs. Harrison are well taken. On the second day of the Convention we had one or two of such recesses, and noticed their good results. It will be well for the officers of the many Conventions, which will be held within the next few weeks, to take the hint. A few minutes for recreation and social conversation among those present, in every hour during the sessions,,will be productive of more good than long and continuous sessions, without such a recess.

We second the motion for blanks to be circulated in the meeting upon which the statistics can be taken from all in attendance. Several were not present at the session when the statistics were taken at the last meeting in Chicago, and they were not, therefore, included in the table. This suggestion, if carried out, will enable the Secretary to obtain all the statistical information desired, from all those who are in attendance.

Pure air is also an essential element of a Convention—and we certainly favor "upward ventilation" in a hall when filled with a "swarm of bee-keepers." Impure air affects us very much in the same manner as it does Mrs. Harrison, and many others. We cannot endure it.

Small Sections for Honey.

Mr. F. L. Dougherty, in the *Indiana Farmer*, gives his opinion of the one and two pound sections thus:

That the larger sizes of sections for comb honey must go, we think is no longer a question of doubt. One pound sections are selling to-day in the market for 2 cents more per pound than the larger sizes. In fact, the larger sizes are a drug on the market, while the one pounds, 4¼x4¼, find ready sale at the 2 cents advance in price. We have struggled hard against this result, as we believed more honey could be secured per colony with the larger than with the smaller sections, and, in the absence of the smaller sizes, we have always disposed of the larger ones very nicely, but one lot of small sections would disturb the market for many days at a time. The laws of trade are invariable, and must be conformed to.

Two Little Bee-Keepers Gone.

A letter from Mr. E. L. Fredenburg, Fentonville, Mich., informs us that his two little sons (Roy and Freddie), were attacked by that direful disease, diphtheria, and both are now numbered with the dead. The BEE JOURNAL sympathizes with the bereaved parents, and offers its condolence. Mr. Fredenburg, with a heart full of grief, says:

"Oh! dear editor, you no doubt received my card, informing you that I was called home on account of the sickness of my family. When I left home I kissed my little "Roy" for the last time, for he was dead when I arrived home again, and Freddie died the next day. Both had that dreadful disease, diphtheria. Roy was two years of age, and Freddie five. They were always delighted to help their "Papa" when I was working among the bees, handing me different things I may want. They would watch the bees, going to and from the hives, with the greatest enthusiasm. But these two little lovers of the honey-bee have gone to their rest, in Heaven, forever. My heart is full of grief. Please make a note of this in the BEE JOURNAL, so that my bee-keeping friends my know of my sad loss."

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It is not Dead, but Sleeping.—Not having received a copy of the Illustrite *Bienen Zeitung*, of Zurich, Switzerland, since June, we supposed it *dead*, and so mentioned the matter on page 539. Last week we received the September number, and, just as we go to press, we have the one for October.

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☞ A correspondent asks if any one may select a Binder for the BEE JOURNAL, among the books given as Premiums for getting subscribers we reply, yes; any book or binder we keep for sale, may be selected by those who get up clubs.

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☞ The semi-annual meeting of the Keystone Bee-Keepers' Association, will be held at Scranton, Pa., on the second Tuesday of December (11th). Our present membership is 36.

GEO. C. GREEN, *Sec.*

Factoryville, Pa., Nov. 23, 1883.

Local Convention Directory.

1883. *Time and Place of Meeting.*

Dec. 5-6, Michigan State, at Flint.
H. D. Cutting, Sec., Clinton, Mich.

Jan. 16, 17.—N. E. Ohio, and N. W. Pa., at Jefferson, O.
C. H. Coon, Sec., New Lyme, Ohio.

Dec. 11.—Keystone, at Scranton, Pa.
Geo. C. Green, Sec., Factoryville, Pa.

Dec. 19.—Lorain County, at Elyria, O.
O. J. Terrell, Sec., N. Ridgeville, O.

1884.
Jan. 8.—De Moines Co., at Middleton, Iowa.

Jan. 8.—Cortland Union, at Cortland, N. Y.
M. C. Bean, Sec., McGrawville, N. Y.

Jan. 10.—Champlain Valley, at Middleburg, Vt.
J. E. Crane, Pres.

Jan. 14, 15, 16.—Ohio State, at Columbus, O.
C. M. Kingsbury, Sec.

Jan. 15, 16.—N. W. Ills., & S. W. Wis., at Freeport.
J. Stewart, Sec., Rock City, Ill.

April 18.—Iowa Central, at Winterset, Iowa.
J. E. Pryor, Sec.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

Popular Ignorance about Bees.

Mr. S. H. Clark, of Delavan, Wis., has sent us the following item from a New York paper, which shows very clearly the popular ignorance about bees. It is headed:

AN IMPORTANT DISCOVERY.

Deckertown, Sussex County, N. J., Aug. 4.—A great quantity of honey is made in this and the adjoining counties. The principal producers are Mr. T. L. Babcock, of Vernon, this county, and Mr. Wisner Utter, of Amity, Orange County, N. Y. The production of honey, this year, will not be as large as was anticipated; the season having been too wet. The bees had an early and good start in the spring on apple, peach, pear and cherry blossoms, and more recently worked on basswood and sumac. During the past month they should have been actively working on white clover. The latter has been plentiful, but the season has been so wet that this flower has not yielded its usual harvest of sweetness, and, as a consequence, the bees of late have been nearly idle, except in the work of making wax—which is the employment of bees during idle seasons—and the slight work which they have been enabled to do on other flowers....

A discovery which Mr. Babcock claims to have made, is of great interest. It is the cell, and not the egg, that determines the sex of the bee. This summer, wishing to stop the excessive swarming from one particular hive, he cut from the combs all the queen-cells, leaving those for the drones and neuters. Soon afterward he discovered that the bees were converting some of the neuter cells into queen-cells, the egg that had been previously laid in each for a neuter remaining. He let the bees go ahead. When the time came for hatching out the eggs, he cut out the cells and they hatched out queens while he was watching them. Two days before these queens were hatched out, he heard the queens calling each other. This is something that he had never before noticed.

The idea of bees "making wax" during "idle seasons!" Bee-keepers will enjoy a hearty laugh at the folly of Mr. B. and that newspaper reporter who was gulled by him!

The the *best joke* is that important discovery!! It is truly wonderful, and Mr. B. is entitled to a "leather medal" for making it! To use the language of the reporter, Mr. B. actually "discovered that the bees were converting some of the neuter cells into queen-cells; the egg that had been previously laid in each for a neuter, remaining. He let the bees go ahead, and when the time came for hatching out the eggs, he cut out the cells, and they hatched out queens, while he was watching them." Had Mr. B. troubled himself to read the bee literature, he would known a great deal more about the habits of bees, and would have been saved the *ludicrous* position he now occupies, while trying to palm himself off as a "discoverer" of that which has been known for ages! and that, too, which the merest novice is quite familiar with.

Of course he made a *discovery;* he heard the queens calling each other"—something "never before noticed!" Such ignorance is inexcusable in this Nineteenth Century, under its full blaze of intelligence! Had it been written a thousand years ago, there *might* have been some excuse for it, but now there is *none.*

Prof. Hasbrouck should send a missionary down to that benighted locality, in his State, to save the wonderful "discoverer" from making himself a *laughing* stock for a world!

☞ The annual meeting of the Cortland Union Bee-Keepers' Association will be held in Cortland, N. Y., on Tuesday, Jan. 8, 1884.

M. C. Bean, *Sec.*
McGrawville, N. Y., Nov. 23, 1883.

☞ To all *new* subscribers for the Weekly Bee Journal who send us $2.00 for 1884, we will send the remainder of this year *free*, from the time the subscription is received. So, the sooner they subscribe, the more numbers they will get *free*.

☞ We regret to learn that Mr. Jerome Twitchell, of Kansas City, Mo., was severely injured last Thursday by a falling wall.

Honey and Beeswax Market.

Office of American Bee Journal,
Monday, 10 a. m., Dec. 3, 1883.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—The market is slow; arrivals exceed the demand which, however, has improved some. There is a better demand for comb honey, and supplies are short, which, no doubt, is temporary, as usual. Last year at about this time, comb honey was at its highest, when our sanguine friends very naturally held on, expecting more. However, large supplies commenced to arrive, and prices kept going down steadily. Bee-keepers in general bent their energies on the production of extracted honey last season, more than ever before. We had a large crop, and extracted has been dull so far, not only because of the large supply, but because manufacturers complain of dullness in their business. Consequently, we have reason to believe that the present slow market is temporary.

The present state of the honey market gives our bee-keeping friends another chance for a disappointment, to-wit: That of over-production of comb honey another season. This is merely an idea of my own, and our friends may take it for what it is worth.

Extracted honey brings 7@9c. on arrival. Best comb honey, 16@17c. in small sections.

BEESWAX—Is of ready sale at 28@30 on arrival.

Chas. F. Muth.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 17@21c. Dark and second quality, 14@15c.; extracted white clover in kegs and barrels, 9@10c.; dark, 8c.

BEESWAX—Prime yellow, 27@29c.

H. K. & F. B Thurber & Co.

CHICAGO.

HONEY—The market remains without change from that of last week. Dealers and retailers buy only enough to supply the demand for present use. It is impossible to place lots, or entire shipments, owing to the reluctance of dealers to buy in advence of immediate wants. Prices obtained for white comb in 1 lb. sections, 18@20c.; 1½ and 2 lb., 15@18c. according to beauty of same. Extracted honey, 8@10c. per lb., according to color, body and flavor.

BEESWAX—Yellow, 33c.; medium, 28@30c.

R. A. Burnett, 161 South Water St.

KANSAS CITY, MO.

HONEY—Receipts of comb honey has been more liberal for the past week, but the demand still keeps everything that is of fair quality well cleaned up. Choice 1 and 2 lb. sections are taken on arrival at 18c.; larger sections and dark honey 16@17c. Sales of extracted for the past week, about 4,000 lbs., mostly at 8 cts. The feeling for extracted is a little better, and I look for a firmer market.

Jerome Twichell, 536 Delaware Street.

SAN FRANCISCO.

HONEY—There has been some attempts at negotiation in comb honey on Eastern account this week. The market for extracted is dull, and it is doubtful if more than 7¾c. could be realized for choice water white in a wholesale way. White to extra white comb, 16@18c.; dark to good, 12@14c.; extracted, choice to extra white, 7½@8c.; dark and candled, 6¼@7c.

BEESWAX—Wholesale, 27½@30c.

Stearns & Smith. 423 Front Street.

ST. LOUIS.

HONEY—Choice comb in light supply, fair demand and firm at 15@17c. per lb.; dark, broken and poorly handled, dull at less. Strained and extracted steady at 6½@7½c.; choice in fancy pkgs. more.

BEESWAX—Salable at 28c. for prime.

W. T. Anderson & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—Choice honey is in excellent demand now. Every lot received thus far in good order, has been sold on arrival; best 1 lb. sections bringing 18c. quickly, occasionally 19c.; 2 lb., 17c, with an occasional sale at 18. Second quality and broken lots are very hard to sell. Extracted honey not in demand.

BEESWAX—28c.

A. C. Kendel, 115 Ontario Street.

BOSTON.

HONEY—Our market is very quiet on honey. We quote 16@18c. for best 2 lb. sections—18@20c. for best white 1 lb., and 10c. for extracted.

BEESWAX—We have none to quote.

Blake & Ripley, 57 Chatham Street.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra

CORRESPONDENCE

For the American Bee Journal.

Ventilation of Cellars.

W. Z. HUTCHINSON.

Before the ventilation of my cellar, the air in it had a close disagreeable odor, and if bees were placed therein, the disagreeable odor was increased, and especially so if the bees suffered from dysentery. Two years ago I made arrangements for a thorough ventilation of the cellar, and since then the air in it has been as pure and sweet as it is in any part of the house. Last winter 14 colonies of bees died from dysentery, in the cellar, and yet, upon entering the cellar, not the slightest odor could be detected.

To remove the impure air, a 2½ inch pipe connected with the kitchen stove pipe was extended down through the floor to within 4 inches of the cellar bottom. That part of the pipe below the floor, and ¾ of that above, was made of wood. the remainder of iron. The pipe was furnished with a damper, which could be opened or closed at pleasure. When first starting the fire, or if at any time it burned low, and we wished to start it up again, the damper was closed, which increased the draft in through the stove. At other times the damper remained open, and the draft that otherwise would have passed through the stove, passed through the pipe; and, as there was less draft through the stove, there was a saving of fuel. The draft through the pipe was often strong enough to carry up light pieces of paper when placed under its mouth.

Please allow me to digress long enough to say that the coal stove, in my sitting-room, is furnished with a similar pipe, only larger, that extends down to within 2 inches of the sitting-room floor. When this pipe is open it ventilates the room by drawing the cold air from the floor, and also effects a saving in fuel. A neighbor, who has a similar stove, but without the ventilating arrangement, burns a ton more coal during the winter.

To furnish the cellar with pure air, the cellar drain was opened to a distance of about 70 feet, and 6-inch tile substituted for the small size. At the point of junction between the two sizes of tile, there was built up, with brick, a sort of "well," which was covered with a wooden ventilator similar to those built upon barns. When the outside temperature was down to zero, the air blowing in through the six-inch tile would be warmed to above the freezing point.

While I consider the ventilation of cellars and houses an excellent thing, I very much doubt its very materially affecting the health of our bees. For two years I have successfully wintered bees in clamps, where there was no ventilation except what came through 18 inches or 2 feet of earth. It is my opinion that the primary cause of dysentery is in the food.

Rogersville, Mich.

For the American Bee Journal.

New Jersey and Eastern Convention.

Reported by J. Hasbrouck, Sec.

The meeting was called to order at 11:30. Roll called. By vote, the Secretary's report was dispensed with, as it had been read by all present. President Thompson delivered his address. He reported that his daughter, who had manipulated his bees, was greatly in favor of the Cyprian and Syrian bees. She finds them much gentler to handle, and more easy to get off the combs. She can manipulate at the rate of 10 colonies of these races to 7 of the Italians. Four Syrians yielded 247 lbs., 4 Cyprians 297 lbs., and 4 Italians 142 lbs.

Mr. L. C. Root, who was present, was elected an honorary member, and invited to take part in the discussions of the meeting.

Mrs. Thomas, of Tacony, Pa., was received as delegate from the Philadelphia Bee-Keepers' Association, and was also elected an honorary member of the Society.

The very interesting report from the President's apiary was then discussed.

Mr. Cook said, he understood that the new races were remarkable for productiveness, and believed that their chief advantage would be in crossing them with our best Italians. He had a Syrian queen, and intended to try these crosses.

Much interest was manifested to hear the opinions of Mr. Root, who responded by saying that we had claimed too much for the Italian bee, but yet, in his opinion, the Italian still stands at the head of races. The principal reason was, that they had been improved in this country by great care in breeding them. His experience with Cyprians had not been good. They breed so late in the fall, and hold drones so late, that they used up too much honey uselessly. The tendency to late breeding, in bees, was good, but the Cyprians overdid the business. He had no doubt that the introduction of this new blood, crossed with Italians, might result in improvement.

Mrs. Thomas was quite in sympathy with the views of the last speaker. There was something good in each race. She felt an attachment to the black bee, but not for honey. She had learned, in a visit to Mr. Alley, that he considers them best as nurses for queen-rearing. She thought the Italians, Cyprians and Syrians were very similar. She had seen the Italians in their own homes, and she had noticed that they do much better in this country. She reported that she had taken an average of 100 lbs. to the hive, the past season, and 150 pounds from each of 2 colonies. She thought the honey industry in its infancy, and thought that its importance ought to be brought to the attention of the public, particularly at fairs. She said the managers of fairs needed to be informed, so that they might know what arrangements to make to insure proper exhibitions of bees and honey. She had been judge for a long time in the Department of Industrial Insects and their Products, such as honey-bees and silk-worms, of the Pennsylvania State Agricultural Society. Everything has more attention given to it than bees. To illustrate the want of knowledge in the managers of this industry, she said there was a premium offered for the best honey extracted in the presence of the committee.

The Secretary said that he was much interested in the President's report, and much surprised at it. He had had quite extensive experience with the two new races of bees, but found that they could carry only about half the load of honey of an Italian; that their tongues were shorter, and that they were exceedingly unpleasant to handle on account of their stinging ability. His queens were imported ones, direct from Mr. Jones. He believed that most of the stock sold for Cyprian or Syrian bees, were extensively crossed with Italians, and that they were good and desirable in proportion to the Italian blood in them.

Mr. Cunkey could substantiate the statement that the Syrians were easy to get off the combs, but they all went into the air, and directly for your face.

Mr. Cook had exhibited bees at the New Jersey State Fair at great trouble and expense, and loss of bees, with little competition, and without much encouragement. He had come to the conclusion that it was impracticable to exhibit bees at fairs.

Mr. Tompkins said that if the business were properly presented to the managers of the State Fair, he had no doubt but that the proper arrangements would be made by them for exhibits, that would be satisfactory and advantageous. He had read of bees being an annoyance, at a fair in Ohio, to those who kept confectionery stands. Provision ought to be made by the exhibitors of bees to avoid such things. The public ought to be instructed about the honey industry. Statistics ought to be gathered, and could be, and ought to be circulated so as to give the industry its proper influence.

Mrs. Thomas said it was perfectly practicable to exhibit bees in the midst of an exhibition, if the bees were given an outlet through a long tube, as she had seen it done, and it formed the most interesting part of the fair.

The President said the greatest difficulty in the way of proper encouragement by the agricultural societies, was that the business is not appreciated by the public. The managers would provide for anything in which the people were interested. The reason that horse-racing was the principal part of agricultural fairs, was because the public demanded them. We must begin with the people; we must educate them.

Mr. Cook moved that a committee of three be appointed by the Chair, to draft a list of premiums and present them to the managers of desirable agricultural societies and endeavor to get them incorporated into the catalogues of those societies Passed.

The meeting then adjourned, for lunch, till 2 p. m.

AFTERNOON SESSION.

The following new members were enrolled: P. F. Reiman, Pedricktown, N. J.; C. W. M. Burroughs, Hillsboro, N. J.; E. K. Dean, Amenia Union, N. Y.; W. B. Treadwell, Riverdale, N. Y.

The following was then read by Mr. J. H. M. Cook, of Caldwell, N. J., on

THE SPRING MANAGEMENT OF THE APIARY.

I select the subject of spring management because I believe that this is the season when our bees require the most careful attention, and that our crop of honey will depend very much on the skillful management of the apiary at this season. I use the term apiary because I think that a large number of colonies can be managed to better advantage than a few, and if I can be the means of eliciting your hearty discussion and severe criticism, I will not have written in vain. I will state that the object to be obtained, and for which the methods described directed, is the production of comb honey. I advance no idea, but such as I have put to a practical test, and proven successful.

We will suppose that our bees have been wintered on their summer stands, as is the usual practice in New Jersey, and are in fair condition. We cannot expect that they will all be in equally good condition—at least, I have never found them so. There are numerous causes to create this difference in our colonies, which we cannot control as we would like, and we must take facts as they are. I would make a general inspection of the colonies, about the 20th of March, or as soon as the weather is warm enough to allow the bees to fly and return to their hives, without being chilled, and ascertain their condition, making a note of it for future reference, and remove all drone comb, if any has been allowed to remain. If any are found short of stores, they should be supplied. This can be done by removing the empty combs, and replacing them with full ones, or combs filled with sugar syrup. If any are queenless, they must be supplied with queens in some manner, being careful to return the chaff or other packing to keep out the cold wind.

I do not think much of upward ventilation at this season. If we are sure that all have plenty of stores, we need not visit them again until the weather is settled and warm enough to remove the packing, and otherwise clean the hive, which we can generally do about the middle of April. We are then ready to commence the campaign. The old adage of the plowman, "To make haste slowly," is equally applicable to the bee-keeper, as it is very injurious to expose our bees to cold in early spring. We should now examine each hive about once a week, spread the brood and place a comb of uncapped honey in the centre, which will cause the bees to feed the queen, and induce her to lay more eggs, and also give her an opportunity to lay in the centre of the brood-nest. But the spreading of the brood must be done with care and judgment, as the brood will get chilled, if the colony is not strong with bees.

I would not advise spreading it if there is not brood in four frames, and then not to place in more than one comb in the centre. The stronger the colony, the faster you can increase it. "Unto him that hath shall be given." By this means we will get our large colonies strong enough to receive the surplus boxes in fruit-blossom time. As the fruit-blossoms are beginning to open, I would put the sections on all colonies that have the brood-chamber three-fourths full of brood, and well-filled with bees. Place sections only on top, using only those sections filled with comb remaining over from last year, as we must not expect them to build much comb thus early in the season. If we feed a little just before fruit blossoms, it will be well, as the queen will lay faster, and the bees will fill the empty cells of the brood-chamber, and be compelled to store all the fruit-blossom honey in the sections.

I have, in this way, secured 25 pounds per hive of choice fruit-blossom honey in sections. If the prospect of fruit-blossom honey is good, it will, perhaps, pay to double up some colonies which are too weak to go into the sections. This I would do by taking one frame each from several strong colonies, and adding them to the weaker ones, that we wish to box, but, unless the prospect is good, it will not pay as it weakens the others very materially.

During the last of fruit blossoms, we may expect our first swarms from the stronger colonies, and I would allow them to swarm naturally at this season, as I wish to secure all the queen-cells fully matured as early as possible, in order to form nuclei for queens. When the early swarms issue, I hive them upon the old stand on frames of foundation, or, which is better, on combs, putting the surplus sections from the old hive upon the swarm, and removing the old colony, and I divide the brood and remaining bees into as many nuclei as possible, giving each a queen-cell and two frames of brood, and place them where we wish our increase to stand.

In this way I would manage all my early swarms until I have about as many nuclei as I expect increase of colonies, and as there is generally a scarcity of honey till white clover, it is well to feed the nuclei; and I will say here that I would not attempt to increase to more than one-half the number of old colonies, as we must keep our colonies strong if we would have box honey. When I have about enough nuclei formed, I continue to hive upon the old stand, placing the sections upon the new swarms as before, but instead of forming nuclei, I divide the brood among the stronger of the weak colonies, and if I have queens that are old and useless, I destroy them and introduce my best queen-cells. The addition of the brood to the weaker colonies will prepare them for boxing.

As soon as my old hives are all well-filled with brood, I would continue to hive upon the old stand as before, and divide the brood among the nuclei, which, by this time, will have young laying queens, and if we add brood, we can build them up very fast, and soon prepare them for boxing also, and from these young queens and hives filled with brood, we may expect a fine yield of honey.

As the clover season is just opening, we should look over all hives which have not swarmed, and swarm all which have started queen-cells with eggs in them preparatory to swarming, putting on the sections, and dividing the brood among the nuclei.

After the fruit blossoms have past, I would not put the sections on until the colony had swarmed, or, at least, until the clover season is well advanced, for if we keep the sections off, they will swarm sooner, and I like to get the swarming done up before the height of the clover season.

The Secretary asked Mr. Cook if he was *really sure* that he had ever seen a great advantage to a colony whose brood was "spread" in the spring, over an equally good colony having plenty of honey, but which had been allowed to have its own way with arranging its brood.

Mr. Cook replied that he very decidedly had. The Secretary said that he could not be sure that he ever had, although he had practiced the plan of spreading brood. He had no doubt that uncapping honey in the hive, hastened the production of early brood.

Mr. Root was desired to give his opinion on this matter, and he said, that although we were sometimes apt to be too anxious to hasten bees in the spring, everything must be done that can be done judiciously to get the colonies very strong by the time the harvests comes on.

This was the most important part of bee-keeping. He could winter bees well enough. He did not ask to be able to do it better, but it was a subject of most anxious inquiry to him, how to get his bees strongest as soon as he needed them. The hive must be adapted to this purpose. He did not leave in all the combs, and the hive must be able to be closed up warmly to what was left. Here was the great importance of a correct size and shape of frame. There was a great disadvantage in the long shallow frame, now attempted to be forced upon the bee-keeping public as a standard. The frames must allow the bees to arrange the brood within a spherical cluster.

The cause of the distinguished success of Julius Hoffman, who was one of the most able bee-keepers in the country, was largely due to his frame, his division-boards, and his enameled cloth spread tightly over the tops of the frames. He uses a frame 11 or 12x14 inches, and eight of them in a hive—a grand hive.

A great disadvantage in the old Langstroth hive was, the shallow ⅜ inch air-chamber over the top of the frames, allowing a circulation of air over the tops of the frames. Bees wintered better in box hives, and we ought to make movable frame hives resemble their good features as far as possible. In the box hive every comb makes a division-board, tightly fitting at the sides and top, so as to allow no circulation of air around or over the bees. To a question, asking if Mr. Hoffman left the enameled cloth on during winters, he answered that he did. He wintered in a very peculiar manner in a depository so warm that the bees hung out over the outside of the hive all the time.

He said, if Prof. Hasbrouck had asked him the same question he put to Mr. Cook, he would have answered, unquestionably he had seen very great benefit from spreading the brood. But it must be done with great care. If the bee-keeper could know certainly just when he would need the bees, there would be little difficulty by manipulating the brood to have just what he wanted on time. If one could see the pile of waxed barrels which he had prepared for buckwheat and fall honey, which were still empty, he would have some idea of the uncertainties of bee-keeping. He said honey ought to be kept in frames to feed in the spring. The capping should be broken, and then the frames should be placed between the brood.

There had been much talk about cheap food for feeding bees. Bee-keepers ought to step on the idea of feeding glucose. The public would get the impression that it was fed to make honey. A good thing about it was, that it does not pay to feed glucose. It does not pay to feed honey back, and he was glad it did not. He next referred to the position of Mr. Cook's paper on natural swarming. He said the box hive was years in advance of natural swarming, and if he used the box hive, he would not allow his bees to swarm naturally. Much was said about the extra energy of natural swarms. This reason of this was, that they had nothing else to do but to store honey. If you accept the motto, "give every hive a good prolific queen," you kill natural swarming.

To a question by Mrs. Thomas, he said, that honey just gathered contained 70 per cent. of water, and that if this was evaporated artificially, it was exactly the same as honey evaporated by the bees in the hive, while the bees were saved much labor. That Mrs. Cotton's feed undergoes no change in the process of its being stored by the bees. If the bees gather molasses, they store molasses. If glucose, they store glucose. It seemed a sad thing to him, when the editor of a bee paper of considerable influence said that "by feeding glucose you obtain honey—not something like honey—it was honey."

Being asked to explain further about his experience in the artificial evaporation of honey, he said that when Mr. Quinby first heard of centrifugal force applied to honey combs, he improvised an extractor immediately, from parts of a fanning mill. At first they had practiced extracting from a small hive, and then letting it stand till it was again filled, and the honey capped. They next tried a large hive with many combs, allowing the bees to spread out the honey, over a large surface, with but little in a cell. They found that in that way they obtained a decided increase of honey. They next concluded that all the bees did to ripen the honey, was to evaporate the water which they noticed would be left hanging to the cover of the hives in large drops. The next step was to prepare an arrangement by which the honey taken from the hive as soon as gathered could be spread out to the air, while it was raised to a high temperature by an oil stove, so that the bees would be saved the great labor which was wearing them out rapidly. He found that he could thus secure a much greater quantity of honey. His machine was much in construction like the evaporators of maple syrup. He keeps the water under it at 75°. He runs it twice over the machine. He has honey thus evaporated which has been kept 2 years without candying.

Dr. Phin, editor of the *Journal of Microscopy*, asked in what way honey evaporated this way was less artificial than maple syrup evaporated in an evaporating pan? Mr. Root replied, that this honey was in no respect different from that ripened in the hive by the bees. Prof. Cook had said that the bees add an acid in ripening the honey, but had finally admitted that ripening was only a process of evaporation of the water contained in the honey. Although he had great respect for the opinion of Dadant & Son, yet he believed that his honey evaporated by his plan was not inferior to any produced by their system.

Mr. Cook asked how he would prevent swarming? He answered that there was no trouble in preventing natural swarms, when bees were run for extracted honey. When taking box honey, his aim is to have all the increase of bees he can in the hives without an increase of colonies, and prevent the desire for swarming. He accomplishes this by removing a card of brood and supplying its place with empty comb or foundation. A good prolific queen, one not already exhausted by laying, is a preventive of swarming. No system of practice in taking box honey will prevent swarming. He was glad that Mr. Cook advised allowing natural swarming at first to obtain queen-cells.

Mrs. Thomas, in speaking of the paper, said she never put on surplus boxes till the hive was filled with honey. Swarming comes to bees as blossoms to flowers. In contracting brood-nest in the spring, she used division-boards of card-boards, cut by machinery to fit the inside of the hive closely.

Mr. Hutchinson said that allowance must be made in adopting the practice of others, for the difference of locality, which was illustrated by the fact that the canal near Mr. Root opened May 10, while the one near himself opened on March 20.

The next paper was then read by the Secretary, on

HANDLING BEES.

This term is significant of the difference between the old bee-keeping and the new. Formerly there was no such thing as handling bees while alive, except to set them over the brimstone pit, but with the introduction of movable combs, bees have been "handled" and "handled," and often handled to death. I think I am safe in saying that "handling bees" is, in itself, always a detriment to them—more or less—and that a hive of bees should never be opened unless there be a positive necessity either to learn its condition, or to perform some operation which, in its effect, will benefit them more than the handling will do them injury, or to take away the surplus for which they are kept. Moreover, handling bees takes time and labor, and the bee-keeper must economize these by spending none which necessity does not demand.

From considerations of this economy of labor, if for no other reason, I would prefer natural swarming to any system of artificial increase. I am not a believer with Mr. House, in his part of "Alley's Handy Book," that a bee-keeper must be able to tell the condition of every colony from the outside appearance. I must confess that after a pretty extensive experience, my opinion passed in that way would be about as valuable as my estimate of the quantity of money in a trunk, by looking at the cover.

While I believe a man must look inside to see how it is with a colony, yet any man who is cut out for a bee-keeper must be able to tell by a rapid examination in the spring, accurately the condition of every colony then, and what help each needs, and afterwards by means of his record he must be able to judge just when and what kind of attention each colony will again need, and, except for that, I consider it necessary for their greatest prosperity, that they be left absolutely alone. It is a fortunate era for the bees of a beginner, when he gets so many colonies, that he is not able "to go through them" every few days for some imaginary purpose.

Admitting that it is necessary that a colony of bees should be over-hauled sometimes, let us consider the wholesome restrictions and limitations of this operation. First, I should say that bees ought not to be opened in cold and disagreeable weather. I am convinced that disturbance at such times, is one cause of that most annoying of accidents to a colony, the balling and killing of a queen by her own subjects. Several years ago a gentleman came to me one cold disagreeable day in April to get me to go and look at his bees, which he wanted to sell. He opened seven hives to show them. In just a week we had about agreed on the price, and I went to look them over to see that they were yet all right. Six out of the seven colonies had queen-cells which they had just begun to cap, showing that the queen had been killed on the day of the previous examination. Again, early last spring, a gentleman called upon me on much the same kind of a day to get a queen. I opened colony after colony, at least five or six, and every time found the bees balling the queen. These are a couple of a great many instances which I could give, where I have found queens balled when the only explanation I could give was disturbance in bad weather. Mr. Doolittle has lately said that in exposing brood in cold weather, it is very easily chilled, so that the bees remove it. I have never observed the fact, but can readily believe that it is the case.

2. At times when bees are not getting honey rapidly, they should not be opened in the middle of the day, which is the time usually recommended by the books for working with bees. As soon as the frames of a colony are exposed at such times, a number of bees, industriously foraging around to find honest work, are attracted by the smell of honey. The smoke of the operator helps them to gain an entrance into the open hive, and a taste of the coveted sweets, and the mischief begins. Constantly increasing crowds follow him around, and force themselves recklessly into every hive he opens, exciting the bees with which he is working to fury in stinging, and going themselves to almost certain death. The whole yard is soon in an uproar, and a battle is begun which continues, at least, for the remainder of the day, and whose victims lay in piles of thousands at every entrance, and often include queens as well as subjects. I suppose, at such times, a movable tent is a kind of protection against robbing, but I regard it as an encumbrance which is perfectly useless, if a little care is observed to leave all necessary manipulations to the proper times of the day. The evening, I consider the proper time, *par excellence*, for handling bees. They are strict believers in the old adage, "Early to bed and early to rise." When the sun is yet a half-hour high they begin to knock off work and gather quietly at home, and it must be something extraordinary which will tempt them away much after this time, unless they are educated to bad habits. Home seems to have a soothing effect upon them as well as upon the human species. Now is the time to do with them what is necessary to be done, and by lively work, everything necessary in seasons of robbing, even in a large apiary, and even where queen-rearing is made an extensive speciality, can easily be done. Of course there would not be time in a large apiary, for putting on boxes and taking of surplus and extracting, but such work is done only when honey is coming in, when one can work at any time of day, without danger from robbers.

It is surprising to one who has never tried it, with what ease and success, queens of all kinds, virgin as well as fertile, can be smoked into the entrances of hives at twilight. Bees are not on the lookout for strangers at this time of day, and they are ready to accept anything put into their hives, especially as the smell of all is made alike with a little smoke. I have not caged a queen of any kind for the last two years, and I have scarcely lost one in this time in introducing, and I have not found it necessary to use tobacco smoke either, as Mr. Alley recommends.

Bees may also be handled in seasons of robbers, early in the morning. There are few times in the summer when a little honey is not found early in the morning, enough to take the attention of the bees, and keep them away from the bee-master long enough for him to do what he cannot find time to do in the evening.

3. All necessary handling of bees must be done with the utmost rapidity, and with just as little disturbance of the arrangements of the bees as possible. To this end, all racks and boxes should be easily adjusted, so that in removing surplus, the bees may be exposed as little, and for as short a time, as possible. If a hive is kept open for a long time, while complicated gimcracks are torn apart and fitted together again, robbing is apt to be induced even in seasons of the best honey flow, and the workers soon find out that their attention is wanted at home, to protect their stores, and to re-establish the destroyed order of the hive, even if the demoralization is not communicated to all other colonies, and a consequent serious loss of honey is the result.

So any extensive mauling of a large colony of bees for so little reason as, perhaps, to find a hybrid queen to put a pure one in its place, should be carefully avoided.

I have been in the habit, for a long time, if any of my neighbors come to me to get some bees, just to raise honey for their own use, to recommend them to keep them in a box hive, and to "take them up" in the fall, believing they will get more honey in this way than if their bees were mauled over every little while, as beginners are very apt to do. If the above precautions in handling bees come to be generally heeded, I would begin to feel that the movable-comb hive is a safe thing in the hands of beginners, but not till then.

Mr. Cook thought but few colonies could be kept by one man, if all the handling was to be done only in the evening.

The secretary replied that when honey was coming in, bees could be handled easily at any time in the day, but in a time of honey dearth, there should be need, even in a large apiary, of no more handling that could be done in the evening.

Mr. Root thought that an impression might go abroad from the paper, that would be undesirable. There were many now keeping bees in box hives, who were afraid to have their bees transferred, fearing injury to them, and it would be unfortunate to have them confirmed, in such opinion. The fact is, it is worth $1 to a colony to be transferred. It would generally pay to drive bees out of a hive, and wash and scald it, and paint full the cracks, sometimes, to get rid of the parasites which were apt to trouble bees. He had even known them to lurk in the grain of the wood, so minute were some of them.

Mr. Hahman transfers and prevents any trouble from robbing by closing other hives.

Prof. Kroeh had had great trouble the past season in introducing queens. He would like to hear Mr. Root's opinion on the subject.

Mr. Root said he was the most successful in introducing without a cage. He knew in an instant when a queen would be killed, but could not tell how. He thinks queens are killed, if at all, the instant they touch the combs. There is not much trouble if bees are well-filled with honey. He shakes the bees all out and then puts the new queen with them, and lets them run in.

Mr. Hutchinson said he introduces queens by Mr. Moore's plan, with a round cage. He places it between the combs, with corks, for 36 hours. He then takes the cork from one end and closes it with paper covered with honey. In a short time the bees eat through the paper and liberate the queen.

Mrs. Thomas objected to that method being called by the name of Mr. Moore, or any other man. She had used that method for 18 years, and never heard it called by any one's name. She never introduces queens to full colonies.

Prof. Kroeh preferred to introduce queens to brood, by putting the queen on a frame of brood, and then putting that frame into a wire-cloth box, and then into the hive. After a few days, when a quantity of brood was hatched out with the queen, let them out to the other bees. He had succeeded once when he did not expect to, by lifting a frame of bees with the queen from a nucleus and putting it into the middle of a queenless colony.

Mr. Cunkey had introduced a great many queens, and had come to the conclusion that the less trouble taken to do it, the better. He always used the Betsinger method, and was generally successful.

Mr. Hahman had visited Mr. Root, at Medina, Ohio, and had seen the man who introduces queens there do it, as if the bees had got educated to receive strange queens.

Mr. Root said, he did not like any method by which the bees liberated the queen. He wanted to see how the bees received her when they first had access to her. He had never seen any reason for thinking that it was dangerous to examine bees soon after a queen was introduced.

Prof. Kroeh asked Mr. Root what "balling" meant.

He answered that there was something very mysterious about it. He did not know the cause, but could easily tell a queen which had been balled. They have a smooth, shining appearance, and were worthless.

To a question as to whether he extracted from the brood nest, he answered, that he had no hesitation in extracting from combs with unsealed brood in them. He had seen brood started from the bottom of the cells by extracting, but he always found that it was soon put into place again by the bees. There was a loss sometimes in extracting, as the bees were disturbed, so that they did not go to the fields for the remainder of the day, while other colonies standing on the scales were gaining 4 or 5 lbs. per hour.

The President said that his daughter who managed his apiary, had developed a method of introducing queens which was very satisfactory. She lifts a frame of brood out of the hive and puts the queen on it—puts it into a nucleus box for a couple of days. She then returns it to the rear of the hive (which is a Simplicity) with the combs running crosswise, and puts it behind a division board which does not reach quite to the bottom.

The Secretary said that he had only alluded in his paper to introducing queens. His method was this: At twilight, after the bees had stopped flying, he put the queen on the alighting board of the hive, and let her run in; at the same time smoking the bees briskly. He had even introduced virgin queens to full colonies, and queens to colonies with fertile workers, and he always put them in, with perfect faith that they would be all right, and had never lost one by that method. He used to be enthusiastic over the Betsinger cage, but the "twilight" plan was much superior.

Mr. Root said he would be afraid to risk it.

Mrs. Thomas asked if any one knew of a successful method of out-door wintering without chaff hives. This fall she had boxes made to put over her hives, and had packed them with leaves, and she wished to have the opinion of the Convention as to its safety. She had got the idea from a florist, who advised a similar method for covering half-hardy plants. She always laid over the frames of every colony a stick of rock candy. She considered it of the greatest importance.

President Thompson said that was the method he always used for wintering. He had permanent boxes around each hive, which were packed with chaff or a similar non-conductor, and then covered by a single pitch roof. There was no cover to his hives. He found the packing as useful in summer as in winter.

The President then announced the special committee to confer with the managers of Fairs. Mr. J. H. M. Cook, Mr. Hutchinson and Prof. Hasbrouck, to which was subsequently added, by resolution, the President himself.

The Treasurer was then directed, by resolution, to have 120 postal cards printed with the notice of the next meeting, one to be sent by the Secretary to each member.

It was resolved that the executive committee prepare a programme of the next meeting, at least a month previous, and that this be published with notices of the meeting.

A vote of thanks was extended to the visiting delegates from the Philadelphia Bee-Keepers' Association for their attendance and participation in this meeting, also to Mr. L. C. Root for valuable assistance in the discussion.

It was then moved and adopted that the Society hold its next meeting for two days, on the second Wednesday and Thursday of March next, to which time the meeting was adjourned.

J. HASBROUCK, *Sec.*

For the American Bee Journal.

I'll Never Mind what they Say.

J. M. HICKS.

I shall not worry or fret,
About what people think
Of my ways or my means—
Of my food or my drink,
If I know I am doing
My best every day—
With the right on my side,
I'll never mind what they say.

I'll lay out in the morning
My plans for each hour,
And I'll never forget
That Old Time is a power.
This will I also remember,
Among truths old and new,
The world is too busy
To think of me and of you.

Then I'll garner the minutes,
That make up the hours,
And in my pilgrimage
I'll pluck in the flowers;
Should grumblers assure me,
My course will not pay—
With my conscience at rest
I'll not mind what they say.

Then let me forget, as I should,
The insensate throng,
That jostles me daily
While I'm marching along:
I'll press onward and upward,
I'll make no delay,
And though the people talk
I'll not mind what they say.

I shall trust in His cause,
And hope for the best,
Knowing, as I well do,
God is holy and just:
He gave us good laws
Which, if we understand,
We shall gather the sweets
He placed at our command.

Then we will guard and protect,
The good honey bee,
He so bountifully provided
For you and for me.
With the right on my side,
I'll not mind what they say,
But pluck in the flowers,
And make no delay.

Battle Ground, Ind.

For the American Bee Journal.

My Experience with Bees.

WM. H. WESTON.

Last year, in my ignorance, I bought what I supposed was a colony of bees, but what I would now call a two-frame nucleus. Of course they did not live through the winter, although I fed them plenty, I having bought them late in the summer, and being put into my hive, they had nothing to start on; so, last spring, I had the hive with some empty comb with which to start the year.

As we had such a late spring, I did not buy any until May. I then bought a colony of common bees in an old hive, and transferred them on the 24th into the hive I prefer, and which, I think, is the best for this climate; I refer to the D. A. Jones hive. We then had cold, wet weather until the latter part of June; the bees gathering but very little, only enough to keep up breeding. About June 20, I divided and introduced an Italian queen to one of them. Shortly after that we had splendid weather for gathering honey, and the bees appeared to realize the fact, by working to their fullest extent, and it being my first year, I had not enough experience to know how much honey a colony could gather, so I was not prepared for such a flow. They filled the hives full, and as I had not an extractor, I had to put in empty frames to keep them going until I could hire one. I had previously bought some comb foundation with which I filled the frames that I replaced the full ones with; so, of course, I was not so badly off, after all.

About the latter part of July, one of the colonies swarmed while I was away from home. As soon as I arrived, my wife informed me of the fact, and as it was my first attempt at hiving a swarm, I have no doubt I was very awkward about it, but I succeeded very well, although I had never seen any person do it. They had swarmed on the trunk of a small shade tree. At last I got them hived, but not knowing whether I had secured the queen, and wanting to be sure about it, I gave them a frame or two of brood from my Italian colony. In a day or two I found out that the queen was in the new hive all right, and was laying first rate. So I will winter 3 colonies. I think, as they are all strong and have plenty of stores to winter them. I have taken out all the frames, leaving five for each hive, which will crowd them up pretty well. I have packed the hive on the inside.

I secured from the one colony and its increase over 100 lbs. of honey, besides some that we used in the house. The most of it was extracted; part in one-pound sections, and the balance in frames, which I will feed to them in the spring. I think I have not done so badly, for my first year, with the small amount of time I had to spare.

London, Ont., Nov. 19, 1883.

Ohio State Convention.

The Ohio bee-keepers will hold their annual convention in Columbus, O., Jan. 14, 15 and 16, 1884. All interested in bee-culture are invited. The following subjects will be discussed; "How to winter bees successfully." "Are the new races of bees a success?" "What can we do to prevent adulteration of honey?" "How to create a home market for honey." "How many colonies can be kept in one locality?" "Can we do without separators?" "Which are best, deep or shallow frames?" "What shall we do with second swarms?" "How many brood frames are necessary in a hive?" "Which is the most salable section, one-half, one or two pounds?" "Is it advisable for all bee-keepers to adopt a standard size of frame?" "What is the most desirable width of sections?"

The above questions will be discussed by eminent men, such as Rev. L. L. Langstroth, Dr. Besse, S. D. Riegel and others, and in addition to the above, Prof. Lizenby, of the Ohio University, will deliver a lecture on "Honey-producing plants:" also Mrs. Jennie Culp will read an essay.

C. M. KINGSBURY, *Sec.*

For the American Bee Journal.

Size and Style of Frame, etc.

G. M. DOOLITTLE.

On page 563 of the BEE JOURNAL, I find these words: "I wish to ask Mr. Doolittle what size, one or two stories, would he adopt if starting anew into bee-keeping, for extracted and comb honey?" In answering the above, I could simply give my preference as to frames, how used, etc., but as this would only prove to the reader that Doolittle used such and such frames and hives, without reasons for so doing, I prefer to tell why I would and *do* adopt the style of frame and hive I use both for comb and extracted honey. This being done, the reader can compare my reasons with those of others using different styles of frames and hives than I do, and thus, after comparison, come to a definite conclusion as to what they will adopt. Mere assertions never help any one to a correct decision on any matter, but reasons are always helpful.

When I first began bee-keeping, I used the Langstroth frame, that being 17⅜x9½. For the reason that my father had been more successful, years before, in producing comb honey while using box hives, when he placed his boxes at the sides of the hive in connection with top boxes, I desired to adopt the plan of both side and top boxing in connection with frame hives. That the above style of frame would not admit of this plan of working to the best advantage, was one reason why I dispensed with it and adopted another. However, even with the Langstroth frame, I was more successful in producing honey on the above plan than I was on the tiering up plan, recommended by many. Next I worked with the American frame, which was at that time (if I recollect aright) 12x14 inches, as used about here. This did not prove better than the Langstroth frame, for while the Langstroth hive gave the largest returns from the top boxes, the American gave the most at the sides.

To avoid these to extremes, I next tried the Gallup style of frame, which is 10¾x10¾, inside measure. With this I found the bees would work in about equal proportions in both side and top boxes, and by adopting the single case system when section boxes came into use, and raising the part filled with sections (by the case) from the sides, and placing them on the top as full cases were removed, I found I could get an average yield of one-third more honey than by any method I had heretofore used.

Then, again, I reduced the size of the brood-chamber to ¾ the size recommended by Mr. Gallup, thus getting the brood in compact form, and close to the sections on both sides and top. The reason why the Langstroth frame is best adapted to top boxing, is because the brood comes nearer to the top than the sides, as a rule, and for the reason that the brood is at the sides when the American frame is used, is why that is best adapted to side storing. The using of so few frames in the brood-chamber, that they shall be literally filled with brood, and then surrounding this brood with sections, is one of the great secrets of success as applied to comb honey, in my opinion.

During the past season I worked some hives with only 6 Gallup frames, instead of 9 as formerly used, or 12 as recommended by Mr. Gallup; and met with a success never before attained by me in the production of comb honey. If these colonies so worked, prove equal to wintering, I shall adopt the plan quite largely in the future. That the Gallup frame allows of being successfully worked on the above plan, and that the above plan is the one looking toward the greatest success, is my reason for using it, and the reason why I should adopt it, if I were starting anew into bee-keeping. Some will say that the tiering up plan will distance the above, as to labor required, by a long ways. Admitted, but which is considered the better farmer, the man who employs certain help to work 200 acres of land to secure a certain yield therefrom, or the man who uses the same help on 100 acres, and secures as large, if not a larger amount than does the other from his 200 acres. The greatest number of colonies kept should not be our ambition, but the largest yield possible from a given number. As in the above, our 200-acre farmer has double the capital invested on which he is getting only the same returns as the other with 100 acres, so if we secure the amount it would take to keep 100 colonies of bees for a year as a surplus, where only 50 are kept, we get the honey from our field in shape of surplus instead of feed for the bees, thus making a gain in our favor. As it takes at least 60 pounds of honey to keep one colony of bees for one year, this item is worth looking after.

But I have digressed. I am asked how the frames are placed. I have them run from front to rear of the hive, or endwise to the entrance, for where side boxes are used, the bees would have to travel under or through the boxes to get from the entrance to the brood-chamber.

For comb honey I use a cap or chamber to the hive 8 inches high, so as to cover the top boxes, and also to admit of chaff or sawdust packing for winter. So far I have only spoken of my preference for the Gallup frame as regards comb honey. I have equally good reasons for my adopting it for the formation of nuclei, queen-rearing, wintering, etc., etc., but time and space forbid my giving them at this time.

For extracting, I am as well pleased with the Gallup frame as with any other, and as I use it for comb honey, of course I prefer it for extracting. Were I working for extracted honey exclusively, I should not consider its advantages as great as I do for comb honey. That it can hang in the extractor the same as in the hive, is one reason for preferring it, and that the Langstroth frame cannot so hang in the extractor, is an objection to it, in my opinion.

In extracting, I use two different plans, one of which is to use the hive two and three stories high, leaving the combs undisturbed until the honey season is over. The other is to place combs in the side storing apartments of my comb honey hive, and extract from them as fast as filled, ripening the honey in a warm room, in open-mouthed vessels. Each plan has its advantages and disadvantages. By the former I get a splendid article of honey with a little labor. By the latter I get nearly double the quantity, but it requires more labor, at a time labor is of the greatest value, and the quality of the honey is not nearly as good. If this reply is not satisfactory in all points to Mr. Molesworth, he will please call again, and I will try and make it so.

Borodino, N. Y.

The Michigan Convention.

DEAR MR. EDITOR:—May I ask you to call special attention to our next annual meeting to be held in Flint, Dec. 5 and 6, of the Michigan Bee-Keepers' Association. We expect to have by far the best meeting ever held in the State. It is expected that the Rev. L. L. Langstroth will be present. To see and hear him will pay any one for the trouble and expense incident to the journey. We also expect D. A. Jones, A. I. Root, C. F. Muth, and hope to have C. C. Miller and T. G. Newman. From what I hear, Michigan bee-keepers are to be out in force. Hotel rates are to be $1.00 a day. Further particulars as to programme, will be given soon. We expect to get reduced rates on the railroads. To aid in this, and that I may know how many certificates on railroads to ask for, will every one in this or other States who expect to come, drop me a card at once to that effect?

A. J. COOK, *President.*

[Sorry we cannot attend.—ED.]

☞ The annual meeting of the Lorain County Bee-Keepers' Association will be held in the Court House at Elyria, Dec. 19, 1883.

O. J. TERRELL, *Sec.*

North Ridgeville, O.

☞ Owing to the death of our Secretary, Mr. T. Brookins, please announce in the BEE JOURNAL that the annual meeting of the Champlain Valley Bee-Keepers' Association, will meet in the parlors of the Addison House, Middleburg, Vt., the second Thursday in January, 1884.

J. E. CRANE, *Pres.*

☞ A meeting of the bee-keepers of Des Moines Co., Iowa, will be held on the second Tuesday in January, at 10 a. m., for the purpose of organizing a county bee-kepers' association, at Middleton, Iowa, in R. C. Crawford's Hall. JOHN NAU, FRANK MELCHER, A. M. BALDWIN, W. R. GLANDON, *Committee.*

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Extracted Honey Production.

Mr. James Heddon: Please describe your ½-story box for extracted honey, in the Bee Journal. How wide inside, how big, etc.

2. Is it necessary to glue sections ?

3. Is glassed honey more preferable than tin boxes for retailing extracted honey in ?

4. Is there any danger of loaf or granulated sugar being adulterated, and is the former any better for winter food for bees than the latter ?

Sutton, N. H. F. M. Cheney.

Answers.—To produce extracted honey for sweet sauce, it should be well ripened, capped over before extracted, and I prefer to store it in ½ story frames, otherwise the same size of the hive below, and upon the tiering-up system.

2. Not at all, if they are decently made.

3. I have never seen honey on the market in tin receptacles, where it could compete with that stored in glass ; though tin is most advantageous to the producer, consumers do not like it.

4. Sugar agents tell me that granulated sugar has been adulterated with grape sugar, but that there are refineries that can be relied upon for the pure article. I have little fears, and see no difference between loaf and granulated, though loaf is usually considered a little more refined.

Why use a Honey-Board ?

Will Mr. Heddon please answer, through the Bee Journal, why he uses the skeleton honey-board at all ? If the right bee space is observed between the brood frames and the bottom of the case, is this second space not worse than useless ?

C. H. Dibbern.
Milan, Ill., Nov. 33, 1883.

Answer.—The objections to the use of my honey-board are three: cost, manipulation, and storage when out of use. The advantages are : there are less bees in the way when adjusting and removing supers, less opportunity for robbers to get in their work at that time, the sections are much cleaner and freer from bits of comb, and when taken from the hive are never dripping from broken cells which have been built between them and the brood frames. It makes the queen less liable to go above to lay, economizes wax, by preventing these brace combs. When one case is raised up and another one put under, no braces are lifted with the under sections, to be finished out and attached to the tops of those just put in their place. This bracing will not take place between sections and each other, but between the lower sections and brood frames, if the honey-board is not used ; hence, only one honey-board is needed to each hive, and does not have to be moved through all the manipulations of the supers, only when we work in the brood-chamber, when it is as easily removed as a cover.

The honey-board has 9 slats, with ⅜ spaces between them ; the centre of each slat comes directly over the space between the brood-frames below, and the centre of each top-bar below is directly under the slots of the honey-board. The outer edges of the honey-board are bee-space higher than the top surface of the slats which forms the second space. You see that the supers of sections fit the hive perfectly without any honey-board, and the same with. You also see by what method we cut off this building of brace combs, and at the same time give perfect egress to the heat, odor and bees.

After careful experiment of no small dimensions, I can say that this honey-board is no hindrance whatever to the bees entering the sections. With an upper set of combs for the extractor, it is well-nigh a necessity, and in either case worth many times its cost and trouble.

Section Racks & Double-Walled Hives.

I wish those who speak of their honey racks, would describe them in detail, or else advertise them for sale, so that we could get them, or at least a sample for trial. I would also like to know which is the best way to manage bees in the spring to get the most comb honey ? Is it to make them swarm early, and be ready for white clover ? or, to undertake to stop them from swarming until white clover is over, which was the first of July, this year, and then divide them? I have 8 colonies now, and I wish to double them next year, if they winter all right, which they will do on the summer stands. I would like to know if Mr. Heddon will tell us why he objects to double-walled hives, as we contemplate making ours double, more particularly to keep them cool in summer than to keep them warm in winter, as our winters are not very cold, hardly ever below 10 degrees above zero. S. M. Hicken.
Delaware City, Del., Nov. 26, 1883.

Answer.—How to manage bees in spring to get the most comb honey, though a short question, would demand too long an article for this department. I will write on that, some future time. Regarding double-wall hives, they can be no cooler, nor as cool in summer, as single-wall hives, shaded with a board. This is plainly seen when once thought of.

SELECTIONS FROM OUR LETTER BOX

Bees Prepared for Winter.

Bees are in very good condition this fall. One is almost lost to know what to do, as everybody seems to have a different way of wintering bees. In Simplicity hives, I turn over the bottom boards, fill with sawdust, give six good frames of honey, a division-board on each side, the upper story full of chaff, build a sort of straw-stack over the whole, and give them a good "letting alone" till spring returns. C. Weckeser.
Marshallville, O., Nov. 20, 1883.

Honey Crop in Mississippi.

I am moving my apiary of 300 colonies 15 miles, and find it quite a job. It has been a poor honey season here, this year. 21,500 pounds from 172 colonies, spring count ; part comb and part extracted. The worst that I have ever had in this country.

G. C. Vaught.
Greenville, Miss., Nov. 16, 1883.

My Syrian Bees.

Reading, in the instructive article on page 592 of the Bee Journal, by L. C. Johnson, entitled "The Improvement of Bees," whose experience with the Syrian bees and queens is so near like my own, I will give it to the readers of the indispensable Bee Journal. On the 1st of July, 1883, I received a Syrian queen of Mr. Henderson, of Tennessee. She was immediately introduced into a very light colony of Hybrids, by the smoking method. I never saw bees multiply so fast. As I did not wish to let them swarm, upon the first appearance of queen cells, I removed 4 full Langstroth frames of brood ; but this only checked them for a few days. Soon after, and while I was entertaining company, I saw the Syrians in the air, and, as they did not cluster soon enough to suit me, I took a pail of water and threw some on them with a cup as they they were circling in the air, and they soon returned to the hive. I then watched them for a couple of hours, until I had time to attend to them. I proceeded to divide them, and found two frames with at least 40 queen cells. I then cut out the cells, and laid them down on the cap of the hive ; before I had done I saw one emerge from the cell and fly out of sight, but it soon returned to the place it started from. I soon missed another, which was gone several minutes. I then took the most of the brood, with the old queen and bees, and removed them several feet from the old stand, depending on one of the young queens, and returning bees, to make a colony at the old stand, but the old queen was bound to go, and go she did with a swarm to the woods, when no one saw them. Those remaining built another batch of queen cells, replaced their queen and built up to a fair colony, without help, except a little feeding, and I think will be as likely to winter as well as any I have. I would say in their praise, they are beautiful three-banded bees, smaller than the Italian and quicker in their movements. I have handled them many times without smoke, and think them the gentlest bees I have yet found; I never was stung by one yet. S. J. YOUNGMAN.

Cato, Mich., Nov. 25, 1883.

Irascible Cyprians.

I have 57 colonies of bees in good condition. I have done well with them during the past season, although it could not be called a good honey season in this section. I have the Cyprian, Italian, German, and Syrian bees. Deliver me from the Cyprians; when disturbed, they fight everything in reach of them. Last summer they attacked a horse hitched to a fence a hundred yards distant, and would have killed it had I not been close by. At another time they attacked a tree standing close by; they covered it by thousands; but I could not see that the tree sustained much damage. I find them very prolific, and want to swarm all the time, when they ought to be laying up honey; but I find the hives all full of honey in the fall of the year. In the spring I expect to move my bees out into the country 3 miles from town, and half a mile from any house or public road, and Italianize my apiary as fast as possible. I expect to devote my whole time to my bees hereafter. I find that it pays, if only attended to.

NATHAN M. WOODMAN.

Bushnell, Ill., Nov. 26, 1883.

Give a Frame of Brood to Swarms.

On page 592, Mr. W. H. Stewart says: "If any one has lost a swarm of bees that were hived on full sheets of foundation, let us hear from him." I will answer to that call. Sometime during the month of June, 1881, I transferred a colony of black bees from a box to a Langstroth hive on a full set of full sheets of foundation, and, as there were moths in the box hive, I did not move any of the old combs. As there was a good honey flow at the time, I considered this the same as a new swarm. The first time I hived them they remained only 24 hours, when out they came and clustered in a tree. I examined the hive and found the foundation partly drawn out, and the queen had deposited eggs in it. I again hived them, and they came out again in 24 hours. This time I clipped the queen's wings and returned them, and on the next day they came out again, but, as the queen could not fly, this time she fell in the grass, and the bees came back and clustered outside of the hive. I then gave them a frame of brood, and all went well. What then was the cause of the bees absconding, if not for the want of brood? In this case the foundation did not keep them from leaving the new hive, and they were only quieted by giving them a frame of brood.

J. G. NORTON.

Macomb, Ill., Nov. 28, 1883.

My Report for this Year.

I had, in the fall of 1882, 27 colonies. I wintered them all on the summer stands, and had 27 last spring to begin with. They increased to 47, by natural swarming; I sold 3 and have 44 now, with plenty of white clover honey in the hives to winter on, but I only got an average of 27¾ lbs. of honey to the colony, spring count; it was nearly all white clover honey in 1 and 2 lb. sections, as nice as I ever saw. There was a very heavy crop of white clover, and it lasted longer than usual, but while it was in bloom, the season was so wet and cold that the bees were kept in too much to make much headway, but when there did come a little sunshine, they made use of it. When the clover bloom was gone, the honey season was over; from that on until frost, it was so dry that the bees merely gathered enough for the time being, so that they did not have to fall back on their stores, and, as I did not extract any, that accounts for my bees having white clover honey to winter on. I may be too much of "an old fogy," but I do not believe in taking the honey all away from them and giving them something else to winter on. JACOB COPELAND.

Allendale, Ills., Nov. 22, 1883.

Damage by a Storm.

The storm at Peotone, Ill., on Tuesday night, Nov. 20, split in two my 60 feet barn, killing 5 cows, 3 calves, 2 sheep and one fat hog, besides blowing over half a mile of board fence. My best colony, and 48 colonies of bees on the summer stands, are all safe.

C. SCHRIER.

Peotone, Ill., Nov. 30, 1883.

How I Winter my Bees.

I have 80 colonies of bees in the cellar and 3 outside. My frames are 13½ x9⅛ inches outside and run crosswise; 13 frames to the hive. When the honey season is over, I make a box 12x14¼ inside to hold 8 of my frames which I select for winter. This box will sit inside the hive, making it a complete summer and winter hive. Those wintered in the cellar, have the outside box left on the summer stands, except the bottoms. I put a ⅜ inch stick under each corner of the hives to give air, or rather to keep them dry. I have a cushion on top for out-doors. I make the tops as tight as possible, and fill in around with flax-tow. My cellar is not very dry, but is well ventilated by a pipe connected with my kitchen stove, and an air tube of 4-inch tile running 20 feet underground. I have wintered my bees in this way without loss for 3 years. I put the bees in on Nov. 13 and 14, and to-day they are quiet with temperature at 42 to 45 degrees F. I have no fear of losing any. With the three outside, I am testing what the bees can stand with open doors and closed tops on deep frames. A. WICHERTS.

Matteson, Ill., Nov. 18, 1883.

Prepared for Winter.

The work in the apiary is done once more, and my bees are packed and prepared again for the winter. Last spring I commenced the season with 32 colonies. The spring was cold and wet, and bees did not get enough to carry on breeding, so they had to be fed some. On June 10, white clover bloomed, but yielded less than half a crop of honey. Basswood opened on July 15, and gave a very good yield of honey, but there is very little of it here. With the help of sweet clover, I obtained 300 pounds of comb honey, and 650 pounds of extracted. The comb honey is sold for 20 cents a pound, and the extracted for 12½ cts. 200 pounds of honey I set aside for family use and feeding next spring. The bees increased to 52 colonies. Bees are in good condition for winter.

WM. BOLLINO.

Dunkirk, N. Y., Nov. 29, 1883.

Bee-Keeping in the Indian Territory.

Never hearing anything from this country, I will write a few lines to let the world know that we keep bees too, but it has been a bad year for bees in the Southern part of this Territory and Texas. The spring was so cool and backward that they swarmed but little, and the balance of the season was very poor for honey. I bought several colonies, an extractor, and six Italian queens; made new hives and transferred the bees. I use the Mitchell hive, single story, for extracted honey. They paid expenses, and I realized a little on them. I will run about 50 colonies for extracted honey next year. I have a ready home market at 15 cents for all my honey. We had our first killing frost on the 14th of this month, but it did not kill all of the flowers. My Italians and hybrids are gathering a little honey and pollen to-day, from a little white blossom that grows on the creeks, in the woods. It is warm and pleasant to-day; we have had but two frosts this season.

G. P. GRINSTEAD.

Oakland, Ind. Ter., Nov. 20, 1883.

☞ The Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association, will hold its annual meeting in Temperance Hall, Freeport, Ill., on Jan. 15 and 16, 1884.

J. STEWART, *Sec.*

Rock City, Ill., Nov. 30, 1883.

☞ The 5th annual Convention of the Northeastern Ohio and Northwestern Pennsylvania Bee-Keepers' Association, will be held at Jefferson, Ohio, Jan. 16 and 17, 1884. All are cordially invited.

C. H. COON, *Sec.*

New Lyme, O., Nov. 26, 1883.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

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Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a *continual* statement of account.

How to Create a Market for Honey.

We have now published another edition of the pamphlet on "Honey as Food and Medicine," with more *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy **5** cents, postpaid; per dozen, **40** cents; per hundred, **$2.50**. **500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit. Try it, and you will be surprised.

Our New List of Premiums.

Getting up Clubs for 1884.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

For a club of $20, for 10 Weeklies, or an equivalent in Monthlies, we will present, besides the 15 per cent. in books, a tested Italian queen, by mail, postpaid.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

For a club of 100 Weekly (or its equivalent in Monthlies), with $200, we will send a Magnificent Organ worth $150. See description on page 614 of the Weekly for Nov. 28, 1883.

☞ Do not let your numbers of the BEE JOURNAL for 1883 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

Bee Pasturage a Necessity.—We have issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for ten cents.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

☞ Articles for publication must be written on a separate piece of paper from items of business.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

◆

☞Speak a word for the BEE JOURNAL to neighbors who keep bees, and send on *at least one new* subscription with your own? Our premium, "Bees and Honey," in cloth, for one *new* subscriber to the Weekly, or two for the Monthly, besides your own subscription to either edition, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

◆

☞ We need the numbers of the BEE JOURNAL for August, 1866, and April, 1876. Any one having them to spare, are requested to send us a Postal Card. We will give 25 cents for each. Do not send them without writing, for we want only *one* of each; and, if we are not already supplied, we will take them.

◆

Advertisers' Opinion.

The queen business is *rushing*, and we think the BEE JOURNAL deserves much credit as an advertising medium.
E. A. THOMAS & Co.
Coleraine, Mass., July 18, 1883.

Advertisements.

LIFE INSURANCE THAT INSURES.

THE MUTUAL RESERVE FUND

LIFE ASSOCIATION!

55 Liberty St., NEW YORK,
and 113 Adams St., CHICAGO.

EDWARD B. HARPER, *President.*
THE CENTRAL TRUST COMPANY, of New York, *Trustee of the Reserve Fund.*
O. D. BALDWIN, President Fourth Nat'l Bank, N. Y., *Auditor of Death Claim Account.*

MEMBERSHIP NUMBER, 16,000.

Total Business. Seventy Millions of Dollars.

$100,000 to the Credit of the Reserve Fund.

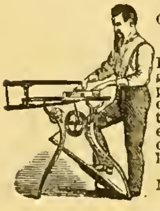
Reserve Fund—Selected Risks—Graded Rates—An open Ledger—A Trust Company as Trustee.

☞ Agents wanted in Illinois.

Address, **D. M. CALDWELL,** *Vice Pres.*,
45D3t 113 ADAMS ST., CHICAGO.

BARNES' PATENT

Foot Power Machinery



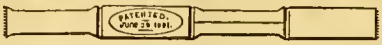
CIRCULAR AND SCROLL SAWS,

Hand, Circular Rip Saws for general heavy and light ripping, Lathes, &c. These machines are especially adapted to **Hive Making.** It will pay every bee-keeper to send for our 48-page Illustrated Catalogue.

W. F. & JOHN BARNES,
No. 2017 Main street,
Rockford, Winnebago Co., Ill.

"BOSS" ONE-PIECE

SECTIONS.


PATENTED JUNE 28 1881.

We have again increased our capacity for making the "BOSS" ONE-PIECE SECTION, and are now ready to fill orders on short notice. We would advise our customers, and especially **SUPPLY DEALERS,** to

ORDER EARLY,

And not Wait until the Rush Comes.

We will not manufacture Hives and Shipping Crates this season, as we have fixed over all our machinery for making the One-Piece Sections.

J. FORNCROOK & CO.
49Ctf Watertown, Wis., Dec. 1, 1883.

PLYMOUTH ROCKS

Iroquois Strain. Four Yards.

Correspondece cheerfully answered Prices reasonabl
W. H. BUSSEY, 131 Lake Street, Chicago.
2BC1y

MANUFACTORY

FOR HIVES, SECTIONS, &c.

I am now prepared to supply dealers and consumers with

Hives, Sections, Broad Frames, Shipping Crates, etc.,

of all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,
49A4t&1Ctf 12Btf DUNDEE, Kane Co., ILL.

Choice Queens!

I am now up with my orders, and can send **QUEENS** by

RETURN MAIL.

I am now culling them down to the very best.

J. T. WILSON,
Mortonsville, Woodford Co., Ky.
6BCtf

Friends, if you are in any way interested in

BEES OR HONEY

We will with pleasure send you a sample copy of the **Monthly Gleanings in Bee-Culture,** with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes,** all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly*, to
Ctf A. I. ROOT, Medina, O.

HEADQUARTERS IN THE SOUTH

For the manufacture of

BEE-KEEPERS' SUPPLIES.

Dunham and Root Foundation a specialty. Italian Queens and Bees from March to November.
☞ Send for my Illustrated Catalogue.
5Ctf **PAUL L. VIALLON,** Bayou Goula, La.

The Bee-Keepers' Guide;

Or, MANUAL OF THE APIARY.

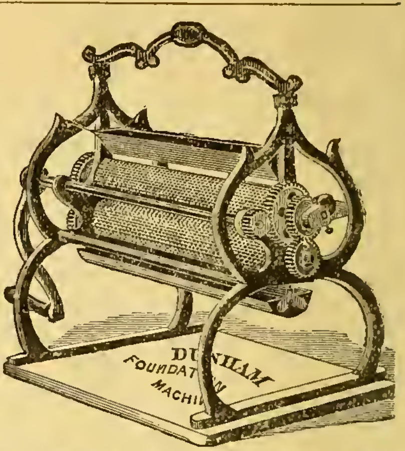
10,000 SOLD SINCE 1876.

11th Thousand Just Out!

10th Thousand Sold in Just Four Months!

More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1 25.** Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
47D10t 18C7t LANSING, MICH.



FRANCES DUNHAM,

Inventor and Sole Manufacturer of

THE DUNHAM FOUNDATION MACHINE

Patented Aug. 23d, 1881.

Your machines are undoubtedly the very best in existence for heavy foundation.
CHARLES DADANT & SON, Hamilton, Ill.
Nov. 24th, 1882.

And the following from the President of the North American Bee-Keepers' Association:

I am quite positive that your Foundation Mills are ahead of anything yet invented.
D. A. JONES, Beeton, Ont., Canada.
Jan. 29th, 1883.

I send you samples of Foundation which I am manufacturing on one of your machines, in sheets 9x18, which measure 11¼ feet to the pound. I think it superior to any samples of thin foundation I have seen. J. G. WHITTEN,
Aug. 14th, 1882. Genoa, N. Y.

Send for description and testimonials to
FRANCES DUNHAM,
8Ctf DE PERE, WIS.

A CRASH!

By corresponding with us, you will see that we mean about 15 per cent. off the regular prices on Extractors, Smokers, etc. Also all other Bee Goods very low if ordered soon.

G. W. STANLEY & BRO.,
49A1t WYOMING, N. Y.

PATENTS

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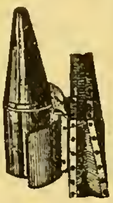
THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is NOW published SEMI-MONTHLY, at Seven Shillings, per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. **Rev. H. R. PEEL, Editor.**

We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal*, both for $3.00 a year.



BINGHAM SMOKERS.

I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including THE CONQUEROR, and THE DOCTOR.

Send for my 32-page Illustrated Catalogue of Bee-Keepers' Supplies of every description.

ALFRED H. NEWMAN,
923 W. Madison, CHICAGO, ILL.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XIX. CHICAGO, ILL., DECEMBER 12, 1883. No. 50.

OLDEST BEE PAPER IN AMERICA
THE AMERICAN
BEE JOURNAL
ESTABLISHED IN 1861
Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

Prepare for the Fairs.

The article on page 643, by the Rev. O. Clute, is very timely, for the usual January meetings of the Executive Committees of Fairs will soon be here.

Public manipulations with bees and magnificent honey exhibits will soon become the most attractive features of State, County, and District Fairs. There are good many reasons for introducing such, but the chief one, perhaps, is that those who produce honey for the market may be induced to present it in the most marketable shape; for the new methods and new ideas of practical management must take the place of the old and undesirable ones.

We respectfully suggest to all who have the management of fairs, that a day be set apart during the season for public manipulations and explanations on this subject, and soon these *industrial days* wili become as popular and attractive to the public as are now the "speed days" of horses, or the "trial days" of reapers and plows.

Bee-keeping should rank one of the foremost, if not the foremost, feature at these great gatherings. The premiums enumerated by Mr. Clute may seem slightly extravagant, to persons who have never seen bees and honey figure to any considerable extent in agricultural and mechanical exhibitions and fairs, but to any reflecting individual, who takes into consideration the magnitude of the bee-keeping interest at the present time, and the illimitable millions of pounds of honey now "wasting its sweetness on the desert air," from want of the proper encouragement and development of the industry, the figures will seem modest indeed.

Sheep and Bee-Keeping.

An exchange gives the following reasons why bees cannot thrive on sheep pastures, and insists upon bee-keepers providing pasturage for bees:

> It is easy to perceive why bees cannot thrive well on a sheep pasture. Sheep eat everything down very closely, and leave nothing in the shape of a flower upon which bees can subsist. There is no other reason for the popular belief that sheep and bees will not thrive together. The bees will not hurt the sheep in any way, but the sheep leave nothing for the bees to pasture in; that is the only difficulty, and where other feeding ground is provided for the bees than the sheep pasture, sheep and bees would thrive very well together.
>
> Melilot clover and aromatic plants, such as mints and catnip, are the blossoms upon which bees seem to find the most continuous supply during the dryest months. Bee-keepers should encourage the introduction of such plants, as they can grow harmlessly along hedges and fences. It may be thought that a few plants of each kind cannot benefit the bees to any extent. Certainly not. But a few plants here and there will produce seed, and finally make waste places become sources of the most delightful of sweets.

☞ Last Monday, "our pastor," the Rev. A. Goodfellow, came to our office for a "call," and with sparkling eyes, said: "Good morning, Bro. Newman; I'll give you a conundrum. Here is the latest; it is rather far-fetched, but good." We remarked that we were more of a *punster* than a diviner of "conundrums," but that we could enjoy "a good thing" at any time. "Well," he said, "why is a bee-hive like a diseased potato?" Of course we gave it up. He replied, "a bee-hive is a bee-holder, is it not?" We assented, but intimated that we could not see *the point*. He then added, "a beholder is a spectator." True, we replied. He continued, "and 'a specked tater' is one that is diseased, is it not?" We remarked that it was very far-fetched, indeed. He smiled, bowed himself out. and added, "put that in the BEE JOURNAL" and here it is.

We have received a copy of Mr. G. M. Doolittle's Club List for 1884, and Circular of bees, queens, etc. It is a very hondsome pamphlet, and is a credit to him as well as Mr. Root, the printer. His address is Borodino, N. Y. On page 5 we notice the following paragraph under the heading of "Remarks":

> Newspapers are now an actual necessity, and the man who does not take at least one or more papers, is soon behind the times, and is also depriving himself of one of the greatest blessings of life. In no other calling in life is the knowledge gained from reading, of more benefit than it is to the bee-keeper. The bee-keeper who cannot afford to take a bee paper, is only penurious to his own injury, of many times its cost; therefore, I urge all into whose hands this circular may fall, to take at least one of the bee papers, that you may gain knowledge which will help you to work your bees to the greatost profit. The Weekly AMERICAN BEE JOURNAL is now an established fact, and is taken by nearly all practical bee-keepers. Its weekly visits are those which no bee-keeper can afford to dispense with, for the knowledge gained from *one* number is often worth many times its cost. The putting in practice of its teachings (and that of the other bee papers), is what helped me to secure $1021.30 net profit from 60 colonies of bees during the past poor season, when basswood was the only tree or plant which yielded honey. The AMERICAN BEE JOURNAL is published in an attractive form, and it is hardly necessary for me to say that I consider it at the head of all the bee papers in the world.

Mr. D. has our thanks for so frankly giving his opinion of the practical value of the BEE JOURNAL.

☞ Mr. George Grimm, of Jefferson, Wis., has gone to Europe, and will be absent several months. He is the son of the world-renowned Adam Grimm, who was one of the pioneers of bee-keeping in America. He has our best wishes for a pleasant voyage and a safe return.

☞ The 28th annual meeting of the Illinois State Horticultural Society, will be held in Maennerchor Hall, Bloomington, Ill., Tuesday, Dec. 18.

Local Convention Directory.

1883. *Time and Place of Meeting.*

Dec. 15.—Piatt County, at Monticello, Ills.
A. T. Pipher, Sec.

Dec. 19.—Lorain County, at Elyria, O.
O. J. Terrell, Sec., N. Ridgeville, O.

1884.
Jan. 8.—Des Moines Co., at Middleton, Iowa.

Jan. 8.—Cortland Union, at Cortland, N. Y.
M. C. Bean, Sec., McGrawville, N. Y.

Jan. 9.—Central Illinois, at Bloomington, Ill.
Jas. Poindexter, Sec.

Jan. 10.—Champlain Valley, at Middleburg, Vt.
J. E. Crane, Pres.

Jan. 14, 15, 16.—Ohio State, at Columbus, O.
C. M. Kingsbury, Sec.

Jan. 15, 16.—N. W. Ills., & S. W. Wis., at Freeport.
J. Stewart, Sec., Rock City, Ill.

Jan. 16, 17.—N.E. Ohio, and N.W. Pa., at Jefferson, O.
C. H. Coon, Sec., New Lyme, Ohio.

April 18.—Iowa Central, at Winterset, Iowa.
J. E. Pryor, Sec.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Cellar Wintering.

Will Mr. Heddon please answer the following:

1. Will a pipe 6x4 inches be large enough to ventilate a cellar containing 50 colonies?

2. Would the above pipe be sufficient unjoined to the stove-pipe, but 25 feet high?

3. Do bees always hum more or less when they are wintered in the cellar?

C. W. Dayton.

Bradford, Iowa, Nov. 28, 1883.

Answers.—I have never been able to satisfactorily demonstrate that ventilation pipes in cellars and double houses did any good in wintering bees. Perhaps they do; though I have seen cellarsfull nearly all die with ventilation pipes attached, and all alive to a colony with no ventilation pipes, and every thing in wet, moldy condition.

1. 6x4 inches would be large enough for the interior of a pipe, either attached to a stove-pipe, or I should think if standing 25 feet high, though I have never tried that.

2. Answered above. I would let the bottom of the pipe extend down to within 6 inches of the bottom of the cellar.

3. I have known bees to winter well where a good deal of humming was kept up through their confinement. I have known bees to keep almost perfectly still during the same time, and they always winter well. I have found that changing the degree of temperature will change the tendency to roar or hum, but it will not prevent or cure diarrhœa. Another thing. I found that in some winters 10° lower temperature kept the bees stiller than the still temperature of the preceding winter, when the number of colonies and hive ventilation was the same. This is one more of the unaccountables.

Frames Standing on the ends in Winter.

Will Mr. Heddon please answer the following question? Have you ever wintered bees on the Langstroth frame standing on the end in a case, packed with chaff? If so, what were the results?

J. G. Norton.

Macomb, Ill., Nov. 28, 1883.

Answer.—I have tipped Langstroth hives up at various angles, from a slight pitch to nearly standing on end, but I have never seen any better results by so doing. You need not be afraid of any derangement by changing the position of the combs. We used to winter box hives upside down with good results, and I have had the queen breed in a comb lying horizontal. If I considered it advantageous to make any change at all, my idea would be to give the hive a pitch a little more than 45 degrees, and do so just as soon as the surplus receptacles are removed in the fall. This will give the colony a chance to arrange their stores to their notion, according to the new position of the hive. In the *Kansas Bee-Keeper* for March 1883, I gave my ideas of wintering in shallow vs. tall hives.

☞ Much complaint was made last season of the delay in getting "supplies," which were ordered of the different "dealers" in the rush of the season. Now, to avoid a repitition, let all order early, and then if a delay does occur, it will not make as much difference to them as if the orders were sent in just as the goods were wanted for use.

☞ For $2.75 we will supply the Weekly Bee Journal one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or in cloth for $3.00. This is a rare chance to get the latest book of that celebrated German bee-master for a trifle. The price of the book alone is $2.00.

☞ Owing to the death of our Secretary, Mr. T. Brookins, please announce in the Bee Journal that the annual meeting of the Champlain Valley Bee-Keepers' Association, will meet in the parlors of the Addison House, Middleburg, Vt., the second Thursday in January, 1884.

J. E. Crane, *Pres.*

Honey and Beeswax Market.

Office of American Bee Journal,
Monday, 10 a. m., Dec. 10, 1883.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—The market is slow; arrivals exceed the demand which, however, has improved some. There is a better demand for comb honey, and supplies are short, which, no doubt, is temporary, as usual. Last year at about this time, comb honey was at its highest, when our sanguine friends very naturally held on, expecting more. However, large supplies commenced to arrive, and prices kept going down steadily. Bee-keepers in general bent their energies on the production of extracted honey last season, more than ever before. We had a large crop, and extracted has been dull so far, not only because of the large supply, but because manufacturers complain of dullness in their business. Consequently, we have reason to believe that the present slow market is temporary.

The present state of the honey market gives our bee-keeping friends another chance for a disappointment, to-wit: That of over-production of comb honey another season. This is merely an idea of my own, and our friends may take it for what it is worth.

Extracted honey brings 7@9c. on arrival Best comb honey, 16@17c. in small sections.

BEESWAX—Is of ready sale at 28@30 on arrival.

Chas. F. Muth.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 17@21c. Dark and second quality, 14@15c.; extracted white clover in kegs and barrels, 9@10c.; dark, 8c.

BEESWAX—Prime yellow, 27@29c.

H. K. & F. B. Thurber & Co.

CHICAGO.

HONEY—The market remains without change from that of last week. Dealers and retailers buy only enough to supply the demand for present use. It is impossible to place lots, or entire shipments, owing to the reluctance of dealers to buy in advence of immediate wants. Prices obtained for white comb in 1 lb. sections, 18@20c.; 1½ and 2 lb., 15@18c, according to beauty of same. Extracted honey, 8@10c. per lb., according to color, body and flavor.

BEESWAX—Yellow, 33c.; medium, 28@30c.

R. A. Burnett, 161 South Water St.

KANSAS CITY, MO.

HONEY—Receipts of comb honey has been more liberal for the past week, but the demand still keeps everything that is of fair quality well cleaned up. Choice 1 and 2 lb. sections are taken on arrival at 18c.; larger sections and dark honey 16@17c. Sales of extracted for the past week, about 4,000 lbs., mostly at 8 cts. The feeling for extracted is a little better, and I look for a firmer market.

Jerome Twichell, 536 Delaware Street.

SAN FRANCISCO.

HONEY—There has been some attempts at negotiation in comb honey on Eastern account this week. The market for extracted is dull, and it is doubtful if more than 7¾c. could be realized for choice water white in a wholesale way. White to extra white comb, 16@18c.; dark to good, 12@14c.; extracted, choice to extra white, 7½@8c.; dark and candied, 6¼@7c.

BEESWAX—Wholesale, 27½@30c.

Stearns & Smith, 423 Front Street.

ST. LOUIS.

HONEY—Choice comb in light supply, fair demand and firm at 15@17c. per lb.; dark, broken and poorly handled, dull at less. Strained and extracted steady at 6½@7½c.; choice in fancy pkgs. more.

BEESWAX—Salable at 28c. for prime.

W. T. Anderson & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—Honey continues in excellent demand, as reported last; every lot of choice white comb is taken up as fast as it comes at 18c. in quantity for 1 lb. sections, and an occasional sale at 19; in a very few instances only, 20c. has been reached. Broken lots and second quality is very slow sale. For extracted there is no demand.

BEESWAX—Is eagerly inquired for at 28@30c., but none to supply the demand.

A. C. Kendel, 115 Ontario Street.

BOSTON.

HONEY—Our market is very quiet on honey. We quote 16@18c. for best 2 lb. sections—18@20c. for best white 1 lb., and 10c. for extracted.

BEESWAX—We have none to quote.

Blake & Ripley, 57 Chatham Street.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra

CORRESPONDENCE

For the American Bee Journal.

Readily Movable Hives.

JAMES HEDDON.

Much of value has been said about movable combs, and while nearly all know of their worth, few give due importance to readily movable hives.

First let me tell you something about how my hive is made, and then you can better form an idea of what I mean by "readily movable hive." The inside measure is 10 inches deep by 11½ wide by 18⅛ long, and takes 8 standard Langstroth frames. The depth, 10 inches, we always make 10⅛ to allow for shrinkage, which will take place in after years, even if we use the most thoroughly seasoned lumber. The sides of the hive are ¾, the ends ⅞, the bottom ⅝, the cover ⅝. From these dimensions we do not vary, and any hive that does vary from them, I believe to be just that much "off."

I fancy I have more good reasons than I care to take space here to enumerate for using these thicknesses of lumber. Our bottom boards are nailed permanently to the hive, and this fact, and the thicknesses of the lumber thus given, makes our hive easily movable.

The foregoing describes the brood-chamber, and the surplus department consists of two to four cases, the sides of which being ⅜ of an inch thick, the partitions ½ inch, and each case weighs only about 4 lbs. These and the honey-board make the hive complete. The cases, when on, being covered by the brood-chamber cover, and each having a capacity for about 25 pounds of honey, they are used upon the tiering-up plan, and not more than three are usually used on a hive at one time. We use no outer case, because none is needed, and in three or four ways such a covering is much worse than useless. The reader will observe that my hive, whether with or without the surplus department, is very light, and easily handled compared with others.

Now, when one comes to manage large apiaries, pushing business upon that scale which necessitates dispatch, he will find a hive possessing this easily movable principle of more value than one possessing all the advantages derived from cumbersome hives. Our methods of securing increase, deposing laying workers, preventing increase or after swarms, and many other manipulations which we find we can accomplish much quicker and better with our peculiar methods than by any other we know of, demand the use of a light, easily movable hive. Such are not only almost a necessity with the less muscular, but very pleasing to all who carry on business in a practical and profitable manner.

It is my opinion that this problem of wintering, or cause of dysentery, is soon to be understood, and it is further my belief that when it is, the next important question will be, "now that I know how to winter my bees with certainty, how can I do this the cheapest," and this will lead to cellar wintering; and here, again, comes in the advantage of the "readily movable hive." About one-third of the time I have spent speculating and experimenting in the line of apiculture, has been spent in hives and fixtures pertaining to them. once supposing that, hidden in mysterious depths, was an almost automatic hive. I long since found out how mistaken was that supposition, yet the thoughts and experiments were not in vain, for I now enjoy a hive much nearer to it than the one used in the past time referred to.

I am aware that no one hive embraces, or can embrace all, or nearly all, the valuable features pertaining to hives that oftentimes combine one such feature. Such combination positively necessitates the omission of two or three others equally valuable, forcing us to make that more difficult selection of the hive combining most worth, in principles, all things considered. Before closing, I wish to state what I believe to be leading principles; which I have faith that the future wisdom and practice of bee-keepers yet to be, will bear me out in.

1. All hives should be easily and readily movable.

2. The stories should move off and on to each other without the necessity of the least upward or downward motion; that is, no telescoping principle.

3. There should be no dead air space or double covering over the surplus room.

4. The sections should never rest on each other or the brood frames.

With your permission, I will quote from that portion of the specifications of the Langstroth patent, relative to the shallow chamber, or air space above the frames or bars.

"The apertures or bee passages in the honey board may be made without being liable to be closed by the bees, as they so frequently are in hives which have not this shallow air space. It will be seen that the bees can pass into this shallow chamber from between all the ranges of comb, and from the front and rear walls, *d*, of the hive, and the sides (*c*, *c*, figs. 1, 2 and 3), of the frames without even passing through the combs at all, and that they can pass from the shallow chamber into any of the honey receptacles, without, as in other hives, losing much time in the height of the honey harvest by crowding through populous combs or contracted passages.

"This shallow chamber, while it greatly facilitates the storage of honey in large receptacles, is specially adapted to securing it in small ones, which usually meet with the readiest sale.

"1. The building of comb requires the bees to maintain a high temperature, and they work to the best advantage when they can economize their animal heat, but this they cannot do in small receptacles, which communicate with the hive through such apertures as are usually made in its top; such apertures not admitting freely the heat and odor from the main colony, and the bees in a small receptacle being too few to keep up the requisite temperature. The shallow chamber, however, like the part of a room nearest the ceiling, is in the storing season always full of the warmest air of the hive—thus aiding to keep the small receptacles full of the same.

"If large openings or bee passages are made in hives having no shallow chamber, for the purpose of giving a freer admission into small receptacles, of the heat and odor of the hive, the bees often connect the combs of the surplus receptacles with those of the main hive, making it difficult to remove the surplus honey in a proper condition, and the queen being thus able to travel over the combs into the receptacles is much more liable to enter them for breeding, than she is where the interposition of the shallow air space would require her to leave the combs.

"2. Bees always desire to work in large numbers, so that they can easily intercommunicate with each other, and the common arrangement for inducing them to work in small receptacles, is opposed to this instinct, whereas the shallow chamber affords a place of repose for multitudes of bees engaged in secreting the wax to be used in the surplus receptacles, and as a succession of bees are thus constantly ascending and descending, they work in small receptacles with scarcely more isolation, and with almost as much rapidity as though they were merely filling the upper part of their main hive."

"This shallow chamber answers other highly important purposes: (*a*) It prevents the bees from cementing the cover or honey *board* to the tops of the frames or bars, thus enabling it to be more easily removed when access is wanted to the combs. (*b*) It enables the cover to be put over the frames or bars with much less danger of crushing bees than if it rested directly on their tops. (*c*) It permits the bees, when the cover is on, to pass from comb to comb above the tops of the frames or bars. (*d*) It aids to keep a feeder in cool weather filled with the warmest air of the hive. (*e*) It gives a dead air space between the combs and the cover, thus more effectually guarding the bees against extremes of heat and cold. (*f*) It enables us to give the bees better protection against dampness in their hives, as by leaving the apertures in the cover open, in cold weather, there is a much freer escape of moisture than when the cover rests flat upon the frames or bars."

Dowagiac, Mich., Nov. 27, 1883.

☞ The 5th annual Convention of the Northeastern Ohio and Northwestern Pennsylvania Bee-Keepers' Association, will be held at Jefferson, Ohio, Jan. 16 and 17, 1884. All are cordially invited.

C. H. COON, *Sec.*

New Lyme, O., Nov. 26, 1883.

For the American Bee Journal.

Prevention of Swarming.

L. L. LANGSTROTH.

Believing that it is right to hive swarms which cannot be kept from issuing on Sunday, let me make some suggestions to those who, like myself, wish on this day to have as little as possible to do with bees.

1. By giving the material for starting queen-cells on Saturday, there will be no occasion to care for them on Sunday.

2. Use some proper device for confining the queens on Sunday, or any other day when you do not wish them to lead out swarms. This is a point to which I have given much attention. On page 174 of the third ediiion (1859) of my work, I say,—

"As the queen cannot get through an opening 5-32 of an inch high, which will just pass a loaded worker, * if the entrance to the hive be contracted to this dimension, she will not be able to leave with a swarm. This method of preventing swarming requires great accuracy of measurement, for a very trifling deviation from the dimensions given will either shut out the loaded worker, or let out the queen. These (adjusted) blocks, if firmly fastened, will exclude mice from the hive in winter. When used to prevent all swarming, it will be necessary to adjust them a little after sunrise and before sunset, to allow the bees to carry out any drones that have died."

In my second edition (1858), page 202, referring to this device, I say:

"By this arrangement, all swarming on Sunday, or any other day when the apiarian does not desire it, may be prevented."

Also, page 203,—

"It also may be found, on further experiment, that the entrances to all the spare honey-receptacles may be so adjusted that the queens will never be able to enter them for the purpose of depositing eggs."

Also, page 202,—

"A very important use may be made of blocks thus arranged, to get rid of the drones. In that part of the day when they are in full flight, adjust the blocks so that they cannot enter. Toward dark, or early next morning, they will be found sprawled out upon the alighting-board, or hanging in clusters under the portico, and may be given to chickens, which can easily be taught to devour them. In a few days nearly all the drones in the apiary may be thus destroyed."

Further experience showing that it was often quite difficult to maintain the 5-32 of an inch by depressions cut in the entrance-regulating blocks, I fastened a few 5-32 strips with clinching nails between two pieces, each 14⅛ inch long (the length of the usual entrance), the lower strip having two bevels to facilitate the exit and entrance of the bees. A central hole, governed by a cork, allowed dead drones to be easily dragged out, or a young queen to fly for mating. Still the bees would worry from having to crawl too far under such narrow dimensions. At last the 5-32 was cut in a thin metal strip, and such a device enabled me both to prevent my costly imported queens from eloping, or running the risk of being destroyed by stray queens.

On a recent visit to the large apiaries of my friend, Mr. D. A. Jones, of Beeton, Ontario, I saw all the points, on which I had labored so long, carried out in a much more satisfactory manner by means or his perforated zinc plates. His *bee-guards*, made of these plates, allow the workers to pass in the freest possible manner, while the ventilation of the hive is not in the least interfered with. The only improvement in them which I can suggest would be to punch out a central hole, governed as in my device, by a small cork. These can be adjusted in a few moments, and Sunday swarming, or swarming on any day not convenient, be prevented without at all worrying the bees. By them, all bad or superfluous drones may be quietly destroyed, by shaking off the bees from their combs, in front of their hive, the queen, of course, being properly rescued. Some may find this the easiest way, more especially with black bees, for finding a queen, or of making it absolutely sure that there is none in a colony to which we wish to introduce a valuable queen. Mr. Jones uses sheets of this perforated zinc to confine the queen to the lower story of the hive, or to any desired part of the brood-chamber, so that she cannot enter the surplus honey receptacles. These sheets also prevent the bees from building small combs between the upper and lower sets of frames—a thing which has often caused so much trouble in hives where more than one story is used.

I see no reason why sections for comb honey may not be set to the best advantage directly on these sheets. Before giving up my apiary, I found that small boxes were much more readily filled by Italian bees, when put directly on top of the frames; and that, however admirably the shallow chamber answered for black bees, the Italians plainly wanted nothing to do with it. How much time and money have been spent in trying to control the mating of our queens! As far as practical results are concerned, have we advanced at all beyond the Kohle process, given so many years ago in the AMERICAN BEE JOURNAL, by which young queens and drones from a selected colony were made to fly later in the day than the other drones? May we not, by Mr. Jones' bee-guards, make a still closer approximation to the mating of our queens with our best drones? If we are not liable to be troubled by drones outside of our own apiaries, how easily we can shut in those that we do not desire to breed from! or, if troubled by drones from bees in the woods, or from colonies too near us, we can confine our young queens, and the drones of selected colonies, until it is so late in the afternoon that other drones have ceased to fly; then by pouring a little thin sugar syrup into the proper colonies, we can quickly tempt both queens and drones to take wing with the excited workers. As the power to control the mating of our queens is fully as important as the control of the same point in our domestic animals, I shall never cease to believe that, sooner or later, we shall obtain the desired result.

The care with which queens and drones can be confined by the Jones bee-guards, without at all lessening the ventilation of the hive, and with the minimum of interference with any of the labors of the colony, promises to open a wide field for many important processes. It may now be possible, in the hands of careful breeders, not only to keep different races of bees pure in the same apiary, but to build up permanently any desired cross between the different races.

Few bee-keepers, who keep up with the modern improvements, are ignorant of the great services of Mr. Jones, in searching the world, at great expense, to procure the best bees. By his great enterprise he has done more than any one living, to make American bee-keeping known in the Old World. We have been much slower, however, to recognize how much he has done for practical apiculture by his many ingenious devices, and, most of all, by the costly experiments and machinery by which he secured for us his perforated metal sheets.

Oxford, O., Nov., 1883.

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[*] Huber does not give the size necessary for confining a queen, but he spoke of a GLASS TUBE adjusted so as to pass out a worker, and not a queen. The smallest queen I ever saw could not get through my blocks. Although the workers are at first slightly annoyed by them, they soon become accostomed to them, as they do not confuse them by presenting the entrance in a new place. The ventilation not depending on this contracted entrance, abundance of air can be given to the bees when the blocks are adjusted so as to confine the queen. Ill-health for the last two summers has prevented me from giving this method of preventing swarming such a full trial that I can endorse it, except for temporary purposes * * * A THEORY which may seem so plausible as almost to amount to positive demonstration, may be encumbered by some unforeseen difficulty, which speedily convinces even the most sanguine that it has no practical value.

☞ The Ohio bee-keepers will hold their annual convention in Columbus, O., Jan. 14, 15 and 16, 1884. All interested in bee-culture are invited. The following subjects will be discussed; "How to winter bees successfully." "Are the new races of bees a success?" "What can we do to prevent adulteration of honey?" "How to create a home market for honey." "How many colonies can be kept in one locality?" "Can we do without separators?" "Which are best, deep or shallow frames?" "What shall we do with second swarms?" "How many brood frames are necessary in a hive?" "Which is the most salable section, one-half, one or two pounds?" "Is it advisable for all bee-keepers to adopt a standard size of frame?" "What is the most desirable width of sections?"

The above questions will be discussed by eminent men, such as Rev. L. L. Langstroth, Dr. Besse, S. D. Riegel and others, and in addition to the above, Prof. Lizenby, of the Ohio University, will deliver a lecture on "Honey-producing plants:" also Mrs. Jennie Culp will read an essay.

C. M. KINGSBURY, *Sec.*

For the American Bee Journal.

"The Pollen Theory"—Facts.

A. R. KOHNKE.

Exactly what we want. Fact No. 1. Colonies affected with the bee diarrhœa have always pollen in their hives; fact No. 2, colonies wintered largely or exclusively on sugar syrup escape the disease; fact No. 3, voidings of the bees affected with the disease have the same color as pollen, there being no other substance in the hive having the same effect to color.

Now, for Mr. Doolittle's experiments, as stated in No. 48, page 606. Mr. D. has tried to force bees by starvation to eat pollen, in which he failed. This proves nothing but his failure; it does not prove that the bees do not eat pollen, for we know they do. Pollen is not, and cannot be the primary cause; certainly not. Primary causes are those which compel the bees to eat the pollen when they ought not to; viz.: out of season. If Mr. D. had furnished besides pollen and little or no honey, those other conditions necessary to produce the disease, I dare say he would have succeeded.

Now, I wish Mr. D. and such other bee-keepers as are interested in it, would experiment as to how to produce the disease, at will, whenever they wish; than we would arrive at facts and try to avoid such conditions.

Like Mr. D., I have also tried to force bees to eat pollen, just one week later than Mr. D.; viz.: Oct. 19, this fall. I had some very old combs, full of honey, which I did not want to use next spring. I extracted the honey, and found two-thirds of the frames filled with pollen and covered with honey. Quite a quantity of the pollen being soaked through with honey, was thrown out. Having some colonies which are rather scant in stores, I fed five of them of this honey, on the above date, which I chose, to avoid robbing, as it was too cold for the bees to fly, as also the 20th and 21st. On the 22d the bees had a chance to fly, and every colony thus fed showed signs of bee diarrhœa. At the same time other colonies, part of which were fed with sugar syrup and part with powdered sugar, made into a dough with clover honey, were not affected.

By all means let us have facts. I have drawn conclusions from such as have come under my observations. Of course, I am liable to err; but, as long as my conclusions are not proven to be erronious, I think I am justified to consider them correct.

To conclude, I will add, that I lost 2 colonies, last winter, by this disease (?) which had not a particle of brood, but the honey was gone clean, and part of the pollen eaten.

Youngstown, O., Nov. 31, 1883.

☞ The annual meeting of the Lorain County Bee-Keepers' Association will be held in the Court House at Elyria, Dec. 19, 1883.

O. J. TERRELL, *Sec.*
North Ridgeville, O.

For the American Bee Journal.

My Experience with Syrian Bees.

L. A. LOWMASTER.

I will give my experience with Syrian bees, and as I do not rear queens to sell, I have "no axe to grind." When I first heard of the Syrian bees, I was anxious to try them, so I sent to Mr. Jones for two queens, which I received in July, 1881, and as it was too late in the season to test them thorougly, I concluded to keep them until I was satisfied whether they were inferior or superior to other races of bees.

In the fall of 1881, when I prepared them for winter, they were stronger in numbers than the rest of my bees. They stood the winter well, and in the spring of 1882, they were more populous than the Italians and Albinos; so I thought that I would rear a few queens for my own use, and I succeeded in rearing some very fine queens, and as I did not put on any boxes in 1882, I did not get any surplus honey; but when I prepared them for winter in the fall of 1882, I found nearly every colony had twice as much honey as they needed to winter on, having the brood-chamber full, with the exception of two or three combs, which was about half-full of brood.

The winter of 1882-83 was hard on bees in this part of the country, but my Syrians came through in good condition; they wintered better than the rest of my bees, excepting the Cyprians, which I had 1¼ miles from my home apiary.

Nearly all of the rest of my bees (Italians, Albinos and hybrids) were weak, and in a deplorable condition, so I had to take frames of hatching brood from the Syrians to build up weak colonies, and when the combs were full of brood, and the young bees commenced to gnaw through, I took them out and exchanged them with the weak colonies the second time.

After taking all the brood out twice, it did not seem to affect them at all; and by the time white clover was in bloom, they were stronger than the Italians and Albinos, and they commenced to work in the sections two weeks before the Italians (I did not take any brood from the Italians). The Syrians cast larger swarms, besides gathering more surplus honey than the Italians ever did for me.

The young colonies filled 8-frame Langstroth hives, and stored more honey in the sections than did the old colonies of Italians and hybrids, while the Albinos and hybrids only filled the brood-chamber, and only gathered enough honey to winter on this fall. When I prepared them for winter they all had plenty of honey to carry them through safely, and more.

I find the Syrians splendid honey-gatherers; they work early and late; they carry heavy loads of honey, and there are lots of them. And yet, some say they are no good.

The Albino bees are not as good as the Italians. I have had them on trial for three or four years, and I know whereof I speak. I never got as much honey from them during all this time as I did this year from one colony of Syrians. I have "weighed them in the balance" and "they are found wanting." They had their day, and must step down and out. I will keep one or two colonies of them just to look at.

One writer says that he would like to see the man "that can tell the difference between the Italians, Syrians and Cyprians." Now, if there is no difference, why is he afraid to try them, before he says they are not as good as his strain of bees? If he will come here, I will show him the difference between the Syrians, Italians and Cyprians.

I find no difficulty in telling one from the other, and even queens fertilized by Cyprian drones, produce bees which are readily known from pure Syrians. The general color, markings and movement of these bees, say nothing of their working qualities, are sufficient to enable one to distinguish the races readily, but there are also other points in which they differ. Upon opening a hive of Syrian bees, and using smoke, the workers crawl about in a manner somewhat like black bees, but soon become quiet, if carefully handled. The workers fly in a darting manner, and alight quickly when near the desired spot, or, perhaps, it cannot be better expressed than to simply say they flit from point to point, while the Cyprians and Italians exhibit a more moderate motion.

The Syrian bees present a decidedly gray color, though the abdoman has a ringed appearance. The ground color is a grayish-black; the body, before the fuzz is worn off, being very light; the gray-colored fuzz is very thick on the thorax, and the latter half on each segment of the abdomen, especially those after the yellow bands, are thickly set with light-colored fuzz, giving them a striking appearance. The three yellow bands are very prominent and yellow.

The shield between the wings is not as prominent as with the Cyprians, though still visible. The Syrian drones are very fine, large and vigorous, and have an exceedinly thick coat of whitish and blue-tinged "fuzz" over the greater part of the thorax, especially on the sides, and a very noticeable amount on the abdomen. In proportion to their bodies, I think their wings are somewhat larger than those of the Italians or Cyprians.

The Syrian queens are wonderfully prolific, laying an incredible number of eggs in a season; in fact, I would not be surprised if a Syrian queen would lay as many eggs in one season as blacks or Italians do in a life time. The Syrian queens are very small when not laying, and some persons think them ordinary looking; but give them plenty of bees and room, and they get very large, and fill a frame of comb with eggs so rapidly that you would imagine it impossible for one queen to deposit them so fast. One Syrian queen can lay eggs enough in 21 days to make from 4 to 6 colonies of bees, if they were all cared for and hatched. This may seem surprising, but try it and be convinced.

The Syrian bees build less drone comb than the blacks or Italians; they protect their stores against robbers with such determination that they often catch the robber on the wing, around the hive, and punish them before they even get time to alight; in fact, they are robber proof.

Their bodies are more telescopic, which enables them to carry larger loads of honey, and to contract their bodies at other times to quite small proportions.

They are swift on the wing, flying so rapidly that only those heavily laden with honey can be secured on the bloom. No race of bees will fly more rapidly, or further (when necessary) in search of honey than will the Syrians. They have been known to fly 6½ miles to obtain pasturage. I have seen my Syrians 2½ miles from my apiary; how much further they went I am unable to say.

As honey gatherers, they are not excelled, and both the Cyprians and Syrians will make a greater effort to obtain honey when there is a scarcity than the other races, and are valuable for comb honey. My Syrians work on the first [illegible] of red clover (large heads) [illegible] there was a plentiful flow of white clover honey; and I never saw bees thicker on buckwheat than I saw the Syrians on the red clover this season.

Mr. Morris, who lives 1½ miles from my apiary, one day last summer came to see my bees, and he told me when he was cutting his red clover for hay, his son remarked: "Father, look at the bees working on the red clover." Mr. Morris said he got off the machine to see if they were his bees, but they were not; they were a different race—his are black bees—when I showed him my Syrians, he said they were the bees that he saw working on his field of red clover, and he said that was the first time he ever saw bees working on red clover. He is a man that can be relied on.

The Syrians winter better than the Italians, come out better in the spring, and do not dwindle so badly. Everything considered, I regard the Syrian bees as the most superior race ever imported into this country, and that, when they have been subjected to the same careful selection and breeding as have the Italians, they will command more prominence than have the Italians. I would most emphatically affirm that the Syrians have a larger number of the necessary qualities than any other race or strain of bees. I will admit that I am using strong language, but my experience with this race, regarding queen-breeding, honey-gathering and wintering, fully warrant me in making the statement. These, with many other experiences and facts connected with the Syrians, fully support me in stating that in them we have the foundation on which to build the *Apis-Americana*. I am not prejudiced against any race of bees, and the above is an honest description of the Syrians as I see them.

Belle Vernon, O., Nov. 22, 1883.

For the American Bee Journal.

Shall we use Old Combs?

C. H. DIBBERN.

It has been claimed from time immemorial that pieces of combs are invaluable to the bee-keeper. I have worked on this line myself for years, but have come to the conclusion that it is valuable only for the wax it contains to be made into foundation. I usually extract all partly-filled combs in the fall, and save them carefully to be used again the following spring. After practicing this for years, I am satisfied it is poor policy. However it may have been, before the advent of foundation, I am satisfied that, like Mr. Heddon's plan of transferring, it is all changed now.

During the past summer I used a good many nice white combs in two-pound sections, that had been built the year before, and as the sections were nice and new, thought I had a bonanza in getting these filled and capped early. Now, what was the result? The bees entered the sections eagerly, and in less than two weeks a good part were capped. By this time I was out of empty combs, and was putting on sections filled with foundation. Now, I was beginning to think of taking off some of the sections that had been filled with empty combs, and what was my disgust and disappointment in finding the bees uncapping it again, and a good deal of it with the caps all burst off. Well, I could only leave it, and soon commenced to take off the sections that had been filled with foundation, that were as fine as I ever saw. I kept taking off some of the sections that were full of empty combs about all summer, and most of it went into No. 2 honey, while that built on foundation, made at the same time, was extra nice.

The explanation is very simple. When honey is coming in liberally, the bees will fill comb that is already built too fast, and cap it over before it is ripe and souring ensues. If the bees are compelled to build the comb, or draw out foundation, the cells are filled so gradually that the honey will keep by the time the cells are built out. Every particle of comb should be saved, and carefully melted up and made into foundation. It may look like sacriledge to melt up nice white comb, but it will pay.

Milan, Ill., Nov. 27, 1883.

Trenton, Ontario, Convention.

A meeting of bee-keepers in the vicinity of Trenton, Ont., was held at Trenton on Oct. 16, 1883. P. C. Dempsey was elected Chairman, and J. H. Peck Secretary. Constitution and by-laws were adopted, and the following were elected officers for the ensuing year:

President, P. C. Dempsey; Vice-Presidents, W. C. Wells, C. W. Post, S. Powell, J. G. A. Wallace, H. G. Stafford, Edward Caverly, Allen Pringle, John Mitchell, R. A. Brook, A. D. Allen, D. J. Hawley; James H. Peck, Secretary-Treasurer; H. F. Whittier, Janitor.

THE BEST METHOD OF WINTERING BEES.

W. C. Wells winters his bees in a cellar under his shop—has a sub-earth ventilation by means of 4-inch tile pipe—prefers 6-inch tile. When he prepares his hive for winter, takes empty combs out of the hive and crowds the remaining sections up close, by means of division-boards. Makes a frame the size of the top of the hive, and about 2 inches deep, tacks on cotton cloth, and fills with sawdust, which allows the dampness to pass off, while it retains the animal heat in the hive. Packs his colonies about the middle of October, and puts them into the cellar about the middle of November. Keeps the temperature as near 45° Fahr., as possible.

W. C. Post winters his bees similarly to the plan of Mr. Wells, but ventilates by means of the cellar windows.

S. Powell winters his bees in a cellar with caps removed, and nothing but a course piece of bagging placed over the top of the hive—ventilates his hives by means of a hole in the back part of the hive, covered by fine wire cloth.

H. G. Stafford winters his bees similarly to Mr. Wells—has sub-earth ventilation for his cellar, in which he winters his bees.

J. G. A. Wallace wintered his bees, last winter, in the stone basement of a barn, and lost 58 out of 66 colonies; attributes his loss entirely to sour honey.

P. C. Dempsey winters his bees in bee cellars, specially built and ventilated for that purpose. His experience covers a period of thirty years. Thinks the principal cause of failure is by not putting bees into good winter quarters before hard freezing weather.

D. J. Hawley winters bees in a good cellar, without any special ventilation except from the bottom of the hive. Does not think ventilation from the top of the hive advisable, as it is essential to keep up the animal heat in the hive. Rarified air caused by animal heat will ascend to the top of the hive, while all the foul gases will descend to the bottom of the hive. Hence, the necessity of bottom ventilation. Where a very large number of colonies are kept in the same cellar, general ventilation is necessary in addition to hive ventilation.

J. H. Peck wintered his bees successfully from the instructions he received from the Hon. Lewis Wallbridge (now Chief Justice of Manitoba), from whom he obtained his bees. Had no ventilation, except from the bottom of the hive. Thinks if bees are put into an ordinary cellar, with at least 30 pounds of honey to each hive, and caps removed, and cushions of sawdust or cotton batting placed on top of the hives, and that where not more than 10 or 12 colonies are placed in the same cellar, that cellar ventilation is not absolutely necessary, but perhaps advisable. His bees were housed, last year, 150 days, or 5 months and 9 days. This is a very long period to feed bees, but if the temperature can be kept up and bees have a good supply of pure honey, the loss by this method of wintering bees will be comparatively small.

SUN AND SHADE FOR BEES.

W. C. Wells prefers apple trees as shade for his bee hives in very hot weather.

C. W. Post prefers fruit trees and grape vines for bee shade.

J. G. A. Wallace preferred large Missouri currant bushes as bee shade. He had been very successful in that way.

S. Powell preferred large board caps placed on the top of the hive 6 or 8 in. larger each way, than the top of the hive. This afforded ample protection against the rays of the sun, and prevented the melting of honey in the sections.

INCREASE OF BEES IN THE SPRING.

W. C. Wells and C. W. Post agreed that the best plan to get a large increase of bees, was to spread the brood frames by removing the division boards and inserting empty cards of combs as fast as the bees are able to cover them. Care should be taken not to spread the brood too fast, as a cold night might chill the brood and produce foul brood.

THE BEST TIME TO TRANSFER BEES.

J. G. A. Wallace prefers the spring when apple trees are in blossom. Messrs. Dempsey, Wells, Post, Hawley and Powell all concured in the view.

Question by Mr. J. H. Peck,—"Which is the best hive for all purposes, a one or two-story hive?" All agreed that a two-story hive was best for all purposes, for the following reasons:

1. All surplus honey, as a rule, was stored in the upper story and the brood-chamber below.

2. The honey above is clearer and free from brood, and can be extracted without injury to the brood, and is more accessible, the lower chamber being left almost entirely for brood, and comb honey is cleaner, as the bees do not travel over it in passing out of the hive.

COMB HONEY, WITH OR WITHOUT SEPARATORS.

Mr. Wallace was of the opinion that he could get more honey without separators.

Mr. Hawley had tried both plans during the past season, and obtained as much comb honey with separators as without. By the use of the separators his comb honey was in much better condition for shipping in the usual size crates than without separators; about one-eighth of the comb boxes were bulged out with honey, and could not be sent out in the usual sized shipping crates.

THE BEST RACE OF BEES.

Mr. Post thought the Italians were the best kind of bees, had destroyed his Cyprian and Syrian queens in consequence of their stinging propensities, and kept none but Italians.

Mr. Dempsey did not like Syrian bees, they were such ferocious stingers. Was better pleased with Italians and Cyprians.

Mr. Hawley preferred a cross between the Cyprians and the Italians. By this means the excellent working qualities of both races were obtained coupled with the prolificness of the Cyprians.

Mr. Stafford preferred the Italians as a class of bees.

Mr. Peck got his bees as pure Cyprians, but had been informed that they were Italians. They were prolific, and good workers, fighting propensities pointed, but by the aid of a "smoker" had no trouble to manage them.

INTRODUCING QUEENS.

Mr. Post makes a cage out of wire netting, an inch and a half wide, 4 inches long, and ¾ of an inch thick, in which he placed a queen and about one dozen working bees, and inserted in the hive between two cards of honey and leave them there for about 48 hours. If the bees are quiet, liberate the queen, and if not quiet in the hive, leave them for 24 hours longer before letting into the hive.

Messrs. Wells and Wallace adopted the same plan.

THE BEST HONEY PLANT.

All agreed that basswood is the best honey plant.

ARE BEES BENEFICIAL TO FLOWERS?

Mr. Stafford stated that his orchard near his bees bore far more fruit than any of his neighbors, the past season.

Mr. Dempsey said that portion of his orchard near his bees produced a fair crop, while the more remote portions bore no fruit worth speaking of. All said that bees were beneficial to flowers.

THE BEST PLACE FOR MARKETING HONEY.

It was agreed that Toronto and Western Ontario afforded the best market for honey, as the people of the Province of Quebec did not consume as much honey in proportion to the population as the people of Ontario.

H. G. Stafford had an average of 190 pounds of extracted honey from each old colony, and an increase of 3 swarms from each old colony, this being the largest yield reported.

The number of colonies represented at the meeting was 1,003. The total number of pounds was 54,000, being a fraction less than 55 pounds per colony. It must be borne in mind that average is based upon the count at the close of the season, and most of our bee-keepers are working to increase their colonies of bees instead of for surplus honey.

W. C. Wells, seconded by H. G. Stafford, moved that the next regular meeting be held in the city of Belleville during the month of February next. Carried.

For the American Bee Journal.

Pollen and Dysentery.

W. Z. HUTCHINSON.

Away back in Vol. I, of the AMERICAN BEE JOURNAL, on page 253, I find the following "Analysis of the Excreta of Bees," by Donhoff.

1. "*Remains of Pollen.* I boiled the excrement in caustic potash lye slightly diluted. After filtering, I washed the residuum in hot dilute muriatic acid. What was left after again filtering, could from its insolubility, be only the remains of pollen. It appeared, under the microscope, like an indistinct granular mass.

2. "*Uric Acid.* I immersed the excrement in concentrated sulphuric acid, in which uric acid remains undecomposed. After carefully decanting the liquid from the resulting carbonaceous mass, I added water; and then washed the precipitated matter in water. I now added one drop of liquor ammoniaci, and one drop of muriatic acid. On heating, the mass assumed a purplish hue—the characteristic reaction of uric acid.

3. "*Hippuric Acid.* I boiled some excrement in caustic p[illegible]h lye. After filtering, I added dilut[illegible]c acid; and obtained a precipi[illegible] which proved to be composed of uric and hippuric acid.

"According to an approximative estimate, the excreta of bees consists of about one-third uric and hippuric acid, and the residue of indigestible portions of pollen."

Now, dysentery or bee-cholera is simply an overloaded condition of the intestinal canal, with no opportunity of flying in the open air to discharge feces; and if this fecal matter is two-thirds pollen, is it not a logical conclusion that the more pollen there is consumed, the sooner will the intestines become overloaded?

Last winter I had colonies die with dysentery, in its worst form, early in January, before a particle of brood had been reared; hence, it certainly was not brood rearing that caused it; and if the fecal matter discharged by the bees is two-thirds pollen, those colonies certainly consumed large quantities of pollen at a time when no brood was being reared. I also had some colonies the same season that were given empty combs in the fall containing no pollen, and were then fed a syrup made from pure cane sugar, and when the bees from these colonies flew, they discharged so little fecal matter that it was scarcely noticeable, and some of them were kept in the cellar, without a flight, all winter. Thirty-two colonies were buried in a clamp, the same season, and all, except those having sugar stores, suffered, and some died from dysentery. When taken out in April, no brood had yet been reared, but a few colonies had fresh laid eggs.

Rogersville, Mich., Dec. 3, 1883.

* * *

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

For the American Bee Journal.

Sending Queens by Mail.

FRANK BENTON.

The communication on the above subject, on page 511 of the American Bee Journal for Oct. 17, conveys the idea that "the first live queen that ever crossed the Atlantic" by mail, was the one sent Aug. 2, by Mr. G. M. Doolittle. The following is verbatim from a letter in my possession. Notice the date.

"Beeton, July 6, 1883.—Mr. Frank Benton, Munich, Germany.—*Dear Sir:* We received a queen from you in a mailing-cage. Most of the bees were dead. I think there must have been at least double as many bees as could get food and water. The live ones were in fine condition ...Too many bees are worse than not having enough. I have instructed the boys to send you a cage of bees, and you can report....

With kind regards to Mrs. Benton and yourself. Yours very truly,
D. A. Jones."

The queen above referred to was an imported Syrian, mailed here during the month of June. She had previously stood a long journey *by mail*, having been prepared according to my instructions in Beyrout, Syria, and had come via Alexandria and Trieste to Munich, a distance of about 2,500 miles, part of which is in a sub-tropical climate, very trying to bees in confinement. About 30 workers were sent with the queen; an experience of several years in sending queens by mail on sea-voyages of 2,000 to 3,000 miles having convinced me that more than 20 workers give better results than a smaller number.

The food was pure sugar candy. The water was in a tin bottle, having a pin-hole, the latter made in the middle of solder to prevent its closing with rust. The cage itself was a strip of pine 5½ inches long, 1⅛ wide, and 1⅛ thick, containing three auger holes 1¼ inches each in diameter, the bottom of each being left about ⅛ of an inch thick. The middle hole, which contained the bees, had several small air holes on each side. The candy was in one end, and the water bottle in the other. A wire-cloth and a card covered the open side.

This cage was illustrated in the *British Bee Journal* for July 1880, and a comparison shows that Mr. Doolittle's cage does not differ in any essential point, though he did not choose to supply water, and used a different kind of food.

The queen I sent went from Bavaria (after the long journey from the East) to the western part of Canada, and could not have been less than 16 or 17 days on the way. I had previously sent queens by mail from Cyprus and Syria to various parts of Europe, some of which were even 14 days—the time Mr. Doolittle's was on the way to Scotland—and since then I have a good many letters from parties in the United States, telling me of the safe arrival of queens that had been 18, and others 19 days on the way by mail; one even that states a queen which was 21 days on the way, "arrived in fine condition, but two of the workers dead."

Thus it is seen that, so far as is now known, the first queen that ever crossed the Atlantic by mail alive did not come from America to the Old World, but went from this side of the water, westward. I have spent too much time, and lost too many queens in testing this matter to resign quietly the claim of having sent out the first queen that ever crossed the Atlantic alive by mail, though Mr. Doolittle and Mr. Cameron doubtless supposed, at the time they wrote, that theirs was really the first.

Munich, Germany, Nov. 8, 1883.

For the American Bee Journal.

Bee-Keeping in Cuba.

A. W. OSBURN.

As the sun was hiding itself behind the far-off western horizon on the 18th of last month, we dropped our anchor in the snug little harbor at Havana, and the staunch sea-craft, the steamship Niagara was at rest. Night shut down upon us, for the first time, in a tropical country.

We left New York on the 13th with 100 colonies of bees, with a complete outfit to begin bee-keeping in Cuba. J. and P. Casanova furnishing the capital for the outfit, myself to furnish what assistance I could to place the enterprise on a working basis, and it is to be the first apiary established on this island, managed after the modern American style.

Our bees stood the voyage well, although they were rolled and tumbled for five days and nights, and many times had more than they wanted of salt water, for they were stored on the second deck, and when the old ship could no longer stand erect, she would lay over on her side for a rest; then the bees would be compelled to take a bath whether they wished it or not.

On the 20th we arrived at this place, and were able to release our bees. All were alive but 3 colonies; in three days more, five empty hives were placed with the three first, making 8 colonies dead, and 92 alive to start off in this land where flowers are so plenty, where the sunshine is perpetual, and where the withering blight of drouth never comes, or Jack Frost makes his appearance.

Although I have been here over a month, I am not able to tell your readers much about the honey flow, only that from the moment the bees were released, there has been no dearth of honey, and, in fact, it would seem there was too much honey, for the bees are literary running the queens out of the hives; as fast as a young bee hatches, they fill the cell with honey. I do not know that the queens fully realize that in November they are expected to keep their hives full of brood. But the bees are getting sick of this kind of work, and are superseding many of the queens.

The old Cubians tell us that this honey flow begins the first of this month, and lasts until February or the first of March (only think of the best honey flow coming in winter and lasting all winter). To you, in the North, it will seem like a dream, when you are huddling around your hard coal stoves to keep warm, and your bees are either chaff-packed outdoors, or stowed away in some underground cellar to keep them from freezing, you can hardly realize that here in Cuba we have our bees under sheds to protect them from the sun, and every evidence points towards success for the busy little workers.

I am not telling anything that in a few months I shall have to take back. There is one thing I will say, that from what I have seen already, I think the bee-keeper will never see honey flow in Cuba as it flows in the North and in California some times; but still it may. Since I have been here, I think the bees have got the most of the honey from the palm-tree, and they tell us it is in bloom the year around. But at this time they say the "boss" honey plant is opening—that is what they call the bell-flower. It yields honey (they say) in great quantities, and of a rich and delicious flavor. So far, the honey I have tasted has been of fine quality, but a little dark; then, again, some of it is white and clear, and to my taste superior to white clover or basswood.

You probably know the prejudice there is in the Northern markets against the honey that has formerly been shipped from this country, and no wonder, they keep their bees in hollow logs, and when they wish to take surplus, they take long knives (the log is open at either end) and cut the honey out—honey, brood, pollen and all—then the honey is squeezed out, and the remainder made into wax. You can easily imagine how the honey looks, and what the flavor would be under such treatment.

The native bee of Cuba is a Simon pure black; there is no German or half-breed about them. But even with the black bees, and their primitive way of handling them, the time was before the war here in Cuba, when they had lots of honey in this primitive way, and it is reported that in the lower end of the Island, one man kept 20,000 colonies, and at the commencement of the war, he sold his bees for $200,000 in gold. I gave you the above as it was repeated to me, not vouching for its truth. But it is not impossible, in a country where you can breed bees at any time of the year, and where there is no time that they do not get a good living.

During the winter months, they tell me, that it is not uncommon for them to take 15 gallons of honey (which would be about 180 pounds) every 15 days. They "rob" them, and, of course, the bees have new comb to build every time. If they do that, Cuba is not so slow a honey country, and what might we expect when managed in the movable frame hives, and the extractor used to throw the honey out.

One word about the face of the country; 'tis simply beautiful, 'tis grand beyond description, rolling and undulating plains, with small brooks and creeks whose banks are thickly studded over with tropical trees, chief among them is the beautiful palm, and the honey plant or tree. The climate is all any one could wish. This section, the Casanova estate, is high and healthful. Yellow fever is seldom if ever known here. In future letters I will report progress as it is developed.

San Miguel, de Jruco, Cuba, West Indies, Nov. 25, 1883.

For the American Bee Journal.

A Premium List for Bees and Honey.

O. CLUTE.

A good premium list for bees, honey, and bee-keeping implements, which, with necessary local modifications, would serve for state fairs. and other large fairs, ought to be prepared by some of our most experienced bee-keepers. Such a list, carefully prepared, would need only slight modifications for many years, and would serve as a guide to the executive committees of many fairs.

Such a list would help much towards the improvement of bee-keeping all over the country. It would tend to the discouragement of poor methods and poor products, and to the encouragement of good ones. In order to have it of service for next year, such a list ought to be prepared very soon, for the executive committees of most of the state fairs meet sometime in January of each year, and then adopt the premium list for the next fair.

I attended the meeting of the executive committee of the Iowa State Agricultural Society, at its winter meeting in Des Moines, last January, and was courteously asked to prepare a premium list. I did prepare one which was adopted without change, and served very well for the fair last September. I am now requested to prepare a list for submission to the board at its meeting, about the middle of January, 1884. I should like to make the list as acceptable as possible to the majority of Iowa bee-keepers, but I have no way of consulting with them except through the columns of the BEE JOURNAL. I therefore ask the JOURNAL to publish the subjoined list now, in order that it may be read by enterprising bee-keepers in Iowa and other states, in time for them to send me their suggestions and criticisms for its improvement.

All bee-keepers are invited to send to me direct, or to Mr. Newman, for publication in the BEE JOURNAL, if he does not object, their thoughts as to the best premium list. It would be especially profitable if we could hear from Rev. L. L. Langstroth, Mr. W. Z. Hutchinson, Mr. O. O. Poppleton, Prof. Cook, Mr. Doolittle, and other successful bee-keepers. This list has been prepared on a basis of an aggregate amount of $300 for premiums. I have put comb honey and extracted honey on a par; have classified honey into "white clover," "linden," and "fall flowers," and have put them all on a par, because there are some sections of the West where the fall honey is the main crop.

In bees, I have offered the highest premium on Italians; have put Syrians and Cyprians on a par, and offered premiums half as great; have offered nothing on blacks. No premiums are offered in this list for the manipulation of bees on the ground, because I am not sure we can have a suitable building. I wish, however, that some of the friends would suggest what such premiums ought to be.

I expect that some of the bee-keepers will criticise my list pretty sharply. Well, friends, pitch in and tear my list all to pieces, on condition that you suggest a better one. What I am after is the best list. I am quite willing that this list of mine shall be knocked into splinters, if from its ruins can be evolved the perfect list. So do not spare your suggestions.

	First Prem.	Second Prem.
Best Ital'n. bees in observatory hive.	$10 00	5 00
Best Cypr. bees in observatory hive.	5 00	2 50
Best Syrian (or holy land) bees in observatory hive..................	5 00	2 50
Best and largest display of different races of bees......................	15 00	10 00
Best comb honey, white clover, not less than 20 lbs	10 00	5 00
Best comb honey, linden, not less than 20 lbs............................	10 00	5 00
Best comb honey, fall flowers, not less than 20 lbs......................	10 00	5 00
Best and largest display, comb honey	15 00	10 00
Best extracted honey, white clover, not less than 20 lbs.................	10 00	5 00
Best extracted honey, linden, not less than 20 lbs.......................	10 00	5 00
Best extracted honey, fall flowers, not less than 20 lbs.......	10 00	5 00
Best and largest display of extracted honey..................................	15 00	10 00
Best collection of honey plants, prepared, mounted, and correctly labeled..................................	10 00	5 00
Best collection honey plants growing in pots and correctly labeled.....	10 00	5 00
Best comb foundation machine, shown in operation.................	10 00	5 00
Best comb fdn. for brood combs....	2 00	1 00
Best comb fdn. for surplus honey...	2 00	1 00
Best honey extractor..................	3 00	1 00
Best smoker..............................	1 00	50
Best hive for comb honey.............	2 00	1 00
Best hive for extracted honey.......	2 00	1 00
Best hive for out-door wintering....	2 00	1 00
Best product, extracted honey, from one colony of bees and its increase for the year.................	10 00	5 00
Best product, comb honey, from one colony of bees and its increase for the year.......	10 00	5 00
Best method of obtaining comb honey, shown by receptacles in place on the hive..................	5 00	2 50

O. CLUTE,
Pres. Iowa Bee-Keepers' Ass'n.
Iowa City, Iowa, Dec. 5, 1883.

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☞ There will be a meeting of the members of the Piatt County Bee-Keepers' Association, at the office of the Secretary in Monticello, Ill., on Saturday, Dec. 15. 1883, at 10 a. m.

A. T. PIPHER, *Sec.*

☞ The Bee-Keepers' Association of Central Illinois, will meet in Bloomington, on Jan. 9, 1884. All are cordially invited to attend.

JAS. POINDEXTER, *Sec.*

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☞ Please give notice, through the BEE JOURNAL, that C. F. Muth, of Cincinnati, and A. I. Root, of Medina, will be at the Ohio Bee-Keepers' Convention, which will be held in Columbus, on Jan. 14, 15 and 16, and join in the discussions of various subjects interesting to bee-keepers.

C. M. KINGSBURY, *Sec.*

☞ The annual meeting of the Cortland Union Bee-Keepers' Association will be held in Cortland, N. Y., on Tuesday, Jan. 8, 1884.

M. C. BEAN, *Sec.*
McGrawville, N. Y., Nov. 23, 1883.

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☞ The Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association, will hold its annual meeting in Temperance Hall, Freeport, Ill., on Jan. 15 and 16, 1884.

J. STEWART, *Sec.*
Rock City, Ill., Nov. 30, 1883.

SELECTIONS FROM OUR LETTER BOX

Syrian Bees, etc.

In a recent article, Mr. W. Z. Hutchinson said of these bees: "Their admirers tell us, if we use them properly, they will be gentle." I extracted 900 lbs. of honey in one day from them, and did not get a sting, and the only smoker I used was a roll of cotton rags. Can Mr. H. do better with hybrid-Italians? They do ripen their honey well; if any one doubts it, I will send him some honey to prove it. I deny that they will "rear brood as long as there is a drop of honey in the hive." I weighed several of my hives this fall, after they had stopped breeding, and they had from 35 to 40 lbs. of honey in them. Two years ago I had an Italian colony that had cast a large swarm, and was ready to swarm again. The queens were piping. I opened the hive to cut out the queen-cells; I smoked them some. They became so irritated, that half of the colony were after me. I threw down my tools and ran for the woods. In doing so, I ran against a tree and skinned my nose. Talk about "irritable" bees; the Syrians are peaceable by the side of such bees. We have no snow yet. and it is warm and summer like.

Cokato. Minn. FAYETTE LEE.

My Report for 1883.

As I did not make a spring report, perhaps it would not be out of place now. The spring found me with 14 colonies, out of the 18 put in the cellar on Nov. 15, 1882. They all had the dysentery, but when I took them out of the cellar on April 15, 1883. In the spring I traded for one; that made me 15 to start with. The spring started favorably. On May 21 it turned cold and wet, and so continued till the last of June. I extracted in June and July. June 19, 45 lbs.; June 20, 51 lbs.; June 29, 106 lbs.; July 7, 176 lbs.; July 10, 100 lbs.; July 18, 122 lbs.; July 19, 163 lbs.; July 29, 51 lbs.; Sept. 3, 123 lbs.; making a total of 937 lbs., and had 286 lbs. of comb honey. They increased to 35, and all are in good condition. I put them in the cellar on Nov. 20. I sold all of my honey at home at 12 cents for extracted, and 17 cents to 20 cents for comb. I have on hand about 200 lbs. of honey. DAVID K. KNOLL.

Salamonia, Ind., Dec. 6, 1883.

Foul Brood.

By request of Wm. B. McCormick, Uniontown, Pa., I give the results through the BEE JOURNAL of an examination of a piece of comb honey sent by him. He says that, last spring, he noticed something which he called chilled brood, in one or more of his hives, but as the trouble seemed to continue during the summer, he concluded the difficulty was due to foul brood. He says: "I lost, last summer, about 20 colonies by it, several just leaving their hives, comb, honey and all, and going off, or trying to get into some other hive. Nearly all the bees in the county seem to be more or less affected in the same way. * * * A. M. Hewit, some 12 miles from here, told me he lost every one of his 70 colonies. An affected colony will not work, but lay around idle, and will sometimes kill their queen." Mr. McCormick thinks only the black bees are thus affected; the Italians not suffering. Now, after the closest investigation, I find nothing of the micro-organism to which we suppose foul brood is due. There are, in the comb cells, both living and dead larvæ; but the dead ones look altogether different from those killed with the disease called foul brood; their original shape is more nearly retained, the fluids of the body are much more watery—not ropy when pulled out—and the odor, though somewhat disagreeable, is characteristically different. What the trouble is I cannot say; but foul brood is not present in the sample received.

Champaign, Ill. T. J. BURRILL.

A Cold, Wet Season.

I commenced the honey season with 50 colonies, but a good many being weak, as we had such a cold and wet spring, they dwindled badly. I had a good flow of honey from white clover, but that was all. I think this was the coldest and wettest summer I ever knew. I now have 83 colonies in winter quarters, in good condition. I have taken 4,023 lbs. of extracted honey, and 950 lbs. of comb honey, and the bees have plenty to winter on.

H. J. SMITH.
Burlington, Wis., Nov. 30, 1883.

My Report for the Year.

On Nov. 20, 1882, I put into winter quarters 16 colonies, in 10-frame Langstroth hives, except a weak one in a 6-frame hive, which starved before spring. Last April I bought 4 colonies, in box hives, making 19 to start this season with. I transferred the four 21 days after the first swarm issued. Honey from the apple bloom was light, owing to the cold, wet weather last spring. I got about half a crop of honey from white clover. The basswood crop was heavy; then came a drouth, followed by an early frost, which made our fall crop light. I took a little over 2,000 pounds of honey, this season (525 being extracted and 1,500 pounds in the comb), nearly all in one-pound sections. My bees increased to 50 colonies. I doubled up some that were weak, and now have 47 packed as last winter, in a low shed facing the south, covered on top, back and ends with dirt and sod. I pack my hives close together with some straw and chaff over and behind them. When cold weather sets in, I put up a door in front of them, which I can let down in front on days suitable for them to fly out. The brown German bees gave larger yields of honey than the Italians. I use what some of our advanced apiarists call rattle-traps; that is an outside cover over my section racks, which I find a great advantage in keeping the hot sun from them; they are also an advantage in cool nights. Oh, yes, I use an inch strip of glass in each side of my section-rack, which saves a great deal of time, peeking in at the top, when I have them tiered up 2 and 3 sections deep. I have no trouble in getting my honey sealed over next to the glass.

R. A. CALVIN.
Hartford, Mich., Dec. 3, 1883.

Italians and Hybrids.

I commenced last spring's work with 10 colonies of bees; they increased to 23, and I bought 8 extra colonies this fall, which make a good stock to start with next spring. Last winter I wintered 2 colonies in a very damp vapory cellar with the thermometer averaging from 40° to 45° Fahr. I gave them lower ventilation about 2 square inches in each hive; one colony was an Italian, and the other a hybrid. The hybrids kept up a continual hum all winter, but the Italians remained as still as death. When I thumped the hive they responded with a sharp hum; then all would be quiet in half a minute. But the hybrids consumed about double the honey that the Italians did, and the colonies were about equal in numbers. The hybrids were in a Quinby hive, while the others were in a Langstroth hive, and they both came out healthy in the spring. The only reason I can give for the extra amount of honey consumed by the hybrids is, that they were not in as warm a hive as the Italians, which was made of inch lumber, while the Quinby hive was made of half-inch lumber.

CHARLES NORRIS.
Traverse City, Mich., Nov. 28, 1883.

My Favorite Feeder, etc.

The feeder I use is, essentially, a broad frame with boards at the sides extending to within an inch of the top, with bottom and sides made water-tight. The end pieces are of inch boards; the sides, bottom and top are of one-half-inch plank undressed, and just as left by the saw. I make the joints water-tight by a layer of white lead, spread in before nailing together. The feeder is just the size and shape of an ordinary broad frame, and holds about one gallon of syrup. It hangs in the hive just as an ordinary frame. In it I place a float made one-half inch smaller than the inside of the feeder; it is simply a section box strip, trimmed, till it floats loosely in the feeder. I fill this, hang it in the hive, and the feeding is done, with no drowned bees, and not the slightest danger of robbing. I began the season with 11 colonies; I used 4 of them for experiments and queen rearing. The remaining seven were run for comb honey, of which I obtained 560 lbs.; 450 from white clover, a few pounds from linden, and the rest fall honey from various sources. I have sold $75 worth of bees and queens, and have 29 colonies remaining, as the result of the years' increase. I had to feed a few of my queen-rearing colonies; the rest had plenty of stores.

L. C. JOHNSON.
Fountain City, Ind., Dec. 3, 1883.

Ten Dollars a Colony net Profit.

I commenced the season with 20 colonies of black bees, increased to 57, and obtained $180 worth of comb and extracted honey, besides selling 12 colonies at $5 each. The receipts were:

Honey	$180 00
Bees	60 00
Total	240 00
Expense for extractor	$11 50
Foundation	8 40
Lumber	20 00
Total	39 90

Leaving a net profit of $200.

W. G. HAYEN.
Pleasant Mound, Ill., Dec. 3, 1883.

Bee Meeting at Fayette, Iowa.

Our bee-keepers' meeting held at Fayette, Iowa, was quite well attended, and considerable interest manifested, and an organization effected. A. H. Loomis, of Clermont, President; V. Whiting, of Waucoma, Vice-President; B. F. Little, of Brush Creek, Secretary; and H. Randall, of Randalia, Treasurer. We adopted a constitution and by-laws. There were hives, honey, both comb and extracted, extractors, foundation machines, smokers, uncapping knives, etc., etc., on exhibition; all of which attracted much attention, and elicited considerable discussion. All in all, we felt as though it was a most interesting and profitable meeting, and I think we have established it upon a pretty sure foundation. Of course it was but a beginning, and somewhat crude, but we hope to improve with age, and be enable sometime to call in outsiders, practical apiarists, to discuss the *pros* and *cons* with us, and address the meeting on "The Blessed Bees." Most of our bees hereabouts go into winter quarters in a weak condition. The long cold fall, without any bee pasturage, leaves them in a bad condition to hope for strong colonies next spring.

A. H. LOOMIS.
Clermont, Iowa, Nov. 24, 1883.

More Honey than I Expected.

The weather has been beautiful for the past few weeks, very much like spring; bees flying quite often, and their humming sounds like the busy time of the year. My honey crop was over 1,000 lbs. instead of 600 lbs., for which I am proportionately happy.

B. H. HOLT.
Adel, Iowa, Dec. 6, 1883.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

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How to Create a Market for Honey.

We have now published another edition of the pamphlet on "Honey as Food and Medicine," with more *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy **5** cents, postpaid; per dozen, **40** cents; per hundred, **$2.50**. **500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit. Try it, and you will be surprised.

Our New List of Premiums.

Getting up Clubs for 1884.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

For a club of $20, for 10 Weeklies, or an equivalent in Monthlies, we will present, besides the 15 per cent. in books, a tested Italian queen, by mail, postpaid.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

For a club of 100 Weekly (or its equivalent in Monthlies), with $200, we will send a Magnificent Organ worth $150. See description on page 614 of the Weekly for Nov. 28, 1883.

☞ Do not let your numbers of the BEE JOURNAL for 1883 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

Bee Pasturage a Necessity.—We have issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for ten cents.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

☞ Articles for publication must be written on a separate piece of paper from items of business.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

* * *

☞ Speak a word for the BEE JOURNAL to neighbors who keep bees, and send on *at least one new* subscription with your own? Our premium, "Bees and Honey," in cloth, for one *new* subscriber to the Weekly, or two for the Monthly, besides your own subscription to either edition, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

* * *

☞ We need the numbers of the BEE JOURNAL for August, 1866, and April, 1876. Any one having them to spare, are requested to send us a Postal Card. We will give 25 cents for each. Do not send them without writing, for we want only *one* of each; and, if we are not already supplied, we will take them.

* * *

☞ A correspondent asks if any one may select a Binder for the BEE JOURNAL, among the books given as Premiums for getting subscribers we reply, yes; any book or binder we keep for sale, may be selected by those who get up clubs.

* * *

☞ To all *new* subscribers for the Weekly BEE JOURNAL who send us $2.00 for 1884, we will send the remainder of this year *free*, from the time the subscription is received. So, the sooner they subscribe, the more numbers they will get *free*.

* * *

Advertisers' Opinion.

The queen business is *rushing*, and we think the BEE JOURNAL deserves much credit as an advertising medium.

E. A. THOMAS & Co.

Coleraine, Mass., July 18, 1883.

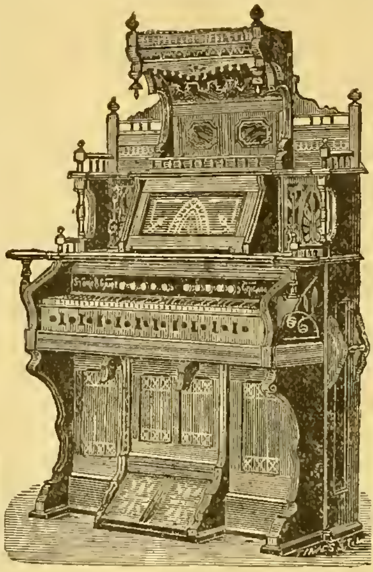
Advertisements.

BOND & PEARCH,
(ESTABLISHED 1860.)
163 South Water St., CHICAGO,
COMMISSION MERCHANTS,
Make a Specialty in HONEY.

Consignments solicited. Will make liberal advances on shipments. Refer to Hide and Leather National Bank. 10Btf

HOPE FOR THE DEAF.

Peck's Patent Tubular Cushioned Ear Drums cure Deafness in all stages. Recommended by scientific men of Europe and America. Write for *illustrated descriptive book* and testimonials from doctors, judges, ministers and prominent men and women who have been cured, and who *take pleasure in recommending them.* They are unseen while in use, comfortable to wear, and make a permanent cure. Address,—**WEST & CO., 7 Murray St., New-York, Agents for South and West.**



STORY & CAMP,
Manufacturers and Wholesale Dealers in
PIANOS AND ORGANS

Decker Bros.,
Haines Bros.,
Mathushek,
Simpson & Co.,
Story & Camp.

Estey,
Story & Camp.

The largest exclusively Piano and Organ house on the Continent.

Territory given. **Agents Wanted.** Protection guaranteed.

Catalogues free to any address.
Write for our prices before buying elsewhere.

STORY & CAMP,
188 & 190 State Street, CHICAGO.
203 N. Fifth Street, ST. LOUIS.

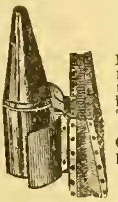
The American Apiculturist.
A MONTHLY JOURNAL,
Devoted to Scientific and Practical
BEE-KEEPING.

Edited by a practical bee-keeper, and published in the broadest sense in the interests of the bee-keeper. Its list of contributors consists of the most practical, prominent and successful apiculturists in America.

Our January number will contain a fine likeness of the
REV. L. L. LANGSTROTH,
and we will send that number free to all who will send their addresses plainly written on a Postal Card. Address,

SILAS M. LOCKE, Editor & Prop'r,
SALEM, MASS.

Sent for 3 mos. for 35 cts.; 6 mos. 60 cts.
50A4t **One year $1.00.**

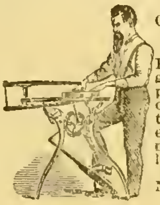


BINGHAM SMOKERS.

I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including THE CONQUEROR, and THE DOCTOR.

Send for my 32-page Illustrated Catalogue of Bee-Keepers' Supplies of every description.

ALFRED H. NEWMAN,
923 W. Madison, CHICAGO, ILL.



BARNES' PATENT
Foot Power Machinery
CIRCULAR AND
SCROLL SAWS,

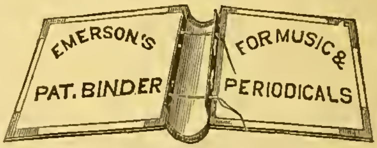
Hand, Circular Rip Saws for general heavy and light ripping, Lathes, &c. These machines are especially adapted to **Hive Making.** It will pay every bee-keeper to send for our 48-page Illustrated Catalogue.

W. F. & JOHN BARNES,
No. 2017 Main street,
Rockford, Winnebago Co., Ill.

THE AMERICAN POULTRY JOURNAL.

Is a 32-page, beautifully Illustrated Monthly Magazin devoted to
POULTRY, PIGEONS AND PET STOCE
It has the largest corps of practical breeders as editor of any journal of its class in Americ , and is
THE FINEST POULTRY JOURNAL IN THE WORLD.
Volume 12 begins January 1881. SUBSCRIPTION:-$1.00 per year. Specimen Copy, 10 cents.
C. J. WARD, Editor and Proprietor.
182 CLARK ST., - CHICAGO

BIND YOUR JOURNALS
AND KEEP THEM
NEAT AND CLEAN.



The Emerson Binder
IS THE NEATEST AND CHEAPEST.

Any one can use them. Directions in each Binder

For Monthly Bee Journal..................50c.
For Weekly Bee Journal..................75c.

Address, **THOMAS G. NEWMAN,**
925 West Madison Street, **Chicago, Ill.**

THE BRITISH BEE JOURNAL
AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is NOW published SEMI-MONTHLY, at Seven Shillings, per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. **Rev. H. R. PEEL, Editor.**

We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal*, both for $3.00 a year.

OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED TO SCIENTIFIC BEE-CULTURE AND HONEY PRODUCTION.

Vol. XIX. Chicago, Ill., December 26, 1883. No. 52.

THE WEEKLY EDITION
OF
THE AMERICAN BEE JOURNAL
PUBLISHED BY
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR,
925 WEST MADISON ST., CHICAGO, ILL.
Weekly, $2 a year; Monthly, $1.

PREMIUM.—Any one sending one *new* subscription for the Weekly, or two for the Monthly, for one year, besides their own subscription for a year for the Weekly, will be entitled to a copy of "Bees and Honey," bound in cloth.

☞ The receipt for money sent us will be given on the address label on every paper. If not given in two weeks after sending the money, write us a Postal card, for something must be wrong about it.

☞ Any person sending a club of six, is entitled to an extra copy (like the club), sent to any address desired. Sample copies furnished *free.*

☞ Papers are stopped at the expiration of the time paid for, unless requested to be continued.

◆

FOREIGN POSTAGE, EXTRA:

To Europe—Weekly, 50 cents; Monthly, 12 cents.
To Australia—Weekly, $1; Monthly, 24 cents.

George Neighbour & Sons, London, England, are our authorized agents for Europe.

Entered at the Chicago P. O. as Second Class Matter.

ADVERTISING RATES.

20 cents per line of space, each insertion,

For either the Weekly or Monthly Editions.

A line of this type will contain *about* 8 words; TWELVE lines will occupy ONE-INCH of space. Transient Advertisements payable in advance. Editorial Notices, 50 cents per line.

Advertisements may be inserted one, two or four times a month, if so ordered, at 20 cents per line, of space, for each insertion.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

THOMAS G. NEWMAN,
925 West Madison Street., Chicago, Ill.

☞ The contents of this number being included in the general indexes to the volume, found on pages 675 to 678, we omit the usual index here.

◆

☞ THIS NUMBER will complete the volume of the Weekly BEE JOURNAL for 1883. We would respectfully request all our present subscribers to renew at once for 1884. By sending on the subscriptions at once, it will save us much extra labor in taking the names from our mail list, which is kept in type, and then replacing them again in a week or two. It will also prevent the loss of any copies of the JOURNAL, and be an advantage all around. If any find it inconvenient to send the $2.00 now, send us a postal card requesting us to continue sending it along, and then the remittance may follow in a week or two afterwards.

Local Convention Directory.

1884. *Time and place of Meeting.*

Jan. 6.—Nebraska State, at Lincoln, Neb.
M. L. Trester, Sec.

Jan. 8.—De Moines Co., at Middleton, Iowa.

Jan. 8.—Cortland Union, at Cortland, N. Y.
M. C. Bean, Sec., McGrawville, N. Y.

Jan. 8-10.—Eastern New York, at Albany, N. Y.
S. Vrooman, Pres.

Jan. 9.—Central Illinois, at Bloomington, Ill.
Jas. Poindexter, Sec.

Jan. 10.—Champlain Valley, at Middleburg, Vt.
J. E. Crane, Pres.

Jan. 14, 15, 16.—Ohio State, at Columbus, O.
C. M. Kingsbury, Sec.

Jan. 15, 16.—Indiana State, at Indianapolis, Ind.
F. L. Dougherty, Sec.

Jan. 15, 16.—N. W. Ills., & S. W. Wis., at Freeport.
J. Stewart, Sec., Rock City, Ill.

Jan. 16, 17.—N. E. Ohio, and N. W. Pa., at Jefferson, O.
C. H. Coon, Sec., New Lyme, Ohio.

Jan. 22-24.—Northeastern, at Syracuse, N. Y.
Geo. W. House, Sec., Fayetteville, N. Y.

Jan 23.—S. E. Mich., at Adrian, Mich.
H. C. Markham, Sec.

April 18.—Iowa Central, at Winterset, Iowa.
J. E. Pryor, Sec.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

CLUBBING LIST FOR 1884.

We will supply the **American Bee Journal** one year, and any of the following Books, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The Weekly Bee Journal,	$2 00..	
and Cook's Manual, 7th edition (in cloth)	3 25..	2 75
Cook's Manual, (in paper covers)	3 00..	2 50
Bees and Honey (T.G.Newman) cloth	2 75..	2 50
Bees and Honey (paper covers)	2 50..	2 25
Binder for Weekly Bee Journal	2 75..	2 50
Apiary Register for 200 colonies	4 00..	3 50
Dzierzon's New Bee Book (cloth)	4 00..	3 00
Dzierzon's New Book (paper covers)	3 50..	2 75
Quinby's New Bee-Keeping	3 50..	3 25
Langstroth's Standard Work	4 00..	3 75
Root's A B C of Bee Culture (cloth)	3 25..	3 00
Alley's Queen Rearing	3 00..	2 75
Scribner's Lumber and Log Book	2 35..	2 25
Fisher's Grain Tables	2 40..	2 25
Moore's Universal Assistant	4 50..	4 25
Honey as Food & Medicine, 100 Copies	6 00..	5 50
Blessed Bees	2 75..	2 50
King's Text Book	3 00..	2 75
The Weekly Bee Journal one year and		
and Gleanings in Bee-Culture (A.I.Root)	3 00..	2 75
Bee-Keepers' Magazine (A.J.King)	3 00..	2 75
Bee-Keepers' Guide (A.G.Hill)	2 50..	2 35
Kansas Bee-Keeper	3 00..	2 75
The Apiculturist, (Silas M. Locke)	3 00..	2 75
New Eng. Apiarian, (W.W.Merrill)	2 75..	2 50
British Bee Journal	3 75..	3 00
The 8 above-named papers	9 00..	7 25

The **Monthly Bee Journal** and any of the above, $1 less than the figures in the last column.

☞ Speak a word for the BEE JOURNAL to neighbors who keep bees, and send on *at least one new* subscription with your own? Our premium, "Bees and Honey," in cloth, for one *new* subscriber to the Weekly, or two for the Monthly, besides your own subscription to either edition, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

◆

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

Advertisements.

THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

DADANT'S HONEY CROP!

Our crop being very large, we offer **THIRTY THOUSAND POUNDS** of extracted Honey

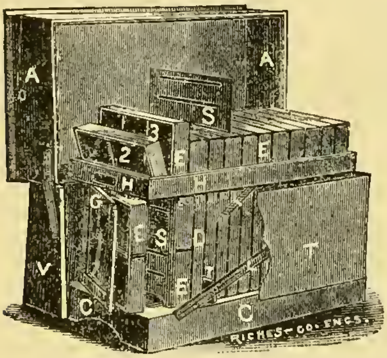
FOR SALE

at REASONABLE PRICES. We have both clover and fall honey. Samples sent on receipt of stamps to pay postage. The honey can be delivered in any shape to suit purchasers.

Send **15c.** for our 24-page Pamphlet on Harvesting, Handling and Marketing extracted honey.

CHAS. DADANT & SON,
5AB1y HAMILTON, Hancock Co., ILL.

1876. CROWN 1882.



The best arranged HIVE for all purposes in existence. Took first premium at St. Louis Fair in 1882 and 1883 over all competitors. Descriptive Circular sent free to all on application.

Address, **ELVIN ARMSTRONG,**
Prop'r. of the Crown Bee Hive Factory and Apiary,
JERSEYVILLE, ILL.

DADANT'S FOUNDATION

From JAMES HEDDON, July 27th, 1883.—Your Foundation is certainly the nicest and best handled of any I have seen on the market. It is the only foundation true to sample I have ever received.

From JAMES HEDDON, Aug. 10th, 1883.—I will contract for 2,000 pounds of foundation for next season on the terms of your letter.

From A. H. NEWMAN, Aug. 24th, 1883.—Book my order for 5,000 pounds for spring delivery.

From C. F. MUTH, Sept. 6th, 1883.—All of your shipments of foundation during the season were sold on the day of their arrival.

Dealers, send in your orders for next spring while wax is cheaper, and save trouble and money.

CHAS. DADANT & SON,
5AB1y Hamilton, Hancock co., Ill.

MANUFACTORY

FOR HIVES, SECTIONS, &c.

I am now prepared to supply dealers and consumers with

Hives, Sections, Broad Frames, Shipping Crates, etc.,

all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,
49A4t&1Ctf 12Btf DUNDEE, Kane Co., ILL.

BOOKS!

Sent by mail, on receipt of price, by
THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

On dozen or half-dozen lots of one kind, we allow 25 per cent. discount, and prepay postage. Special rates, on larger quantities, given upon application.

Dzierzon's Rational Bee-Keeping.—A Translation of the Masterpiece of that most celebrated German authority, by H. Dieck and S. Stutterd, and edited, with notes, by Charles N. Abbott, *Ex-editor of the "British Bee Journal."* Dr. Dzierzon is one of the greatest living authorities on Bee Culture. To him and the Baron of Berlepsch we are indebted for much that is known of scientific bee culture. Concerning this book, Prof. Cook says: "As the work of one of the great masters, the Langstroth of Germany, it can but find a warm welcome on this side of the Atlantic." Mr. A. I. Root says of it: "Old father Dzierzon....has probably made greater strides in scientific apiculture than any one man...For real scientific value, it would well repay any bee-keeper whose attention is at all inclined to scientific research, to purchase a copy. Cloth, **$2.**

Queen-Rearing, by Henry Alley.—A full and detailed account of TWENTY-THREE years' experience in rearing queen bees. The cheapest, easiest and best way to raise queens. Never before published. **Price, $1.00**

Bee-Keeper's Guide; or, Cook's Manual of the Apiary.—This Manual is elegantly illustrated and fully "up with the times" on every subject of bee-culture. It is not only instructive, but intensely interesting and thoroughly practical. The book is a masterly production, and one that no bee-keeper, however limited his means can afford to do without. Cloth, **$1.25**; paper cover, **$1.**

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—Fourth Edition. "Fully up with the times," including all the various improvements and inventions. Chief among the new chapters are: "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. It contains 160 pages, and is profusely illustrated. Price, bound in cloth, **75c.**; in paper covers, **50c.**, postpaid.

Honey, as Food and Medicine, by Thomas G. Newman.— This pamphlet discourses upon the Ancient History of Bees and Honey; the nature, quality, sources, and preparation of Honey for the Market; Honey as food, giving recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc; and Honey as Medicine, with many useful Recipes. It is intended for consumers, and should be scattered by thousands, creating a demand for honey everywhere. Published in **English** and **German.** Price for either edition, **5c.**; per dozen, **50c.**

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, and instructions on the exhibition of bees and honey at Fairs, etc., by T. G. Newman. This is a chapter from "Bees and Honey." Price **10c.**

Swarming, Dividing and Feeding Bees.—Hints to Beginners, by Thomas G. Newman. This is a chapter from "Bees and Honey." Price, **5c.**

Bee Pasturage a Necessity, by Thomas G. Newman—Giving advanced views on this important subject, with suggestions what to plant, and and when and how: 26 engravings. This is a chapter from "Bees and Honey." Price, **10c.**

Bees in Winter, with instructions about Chaff-Packing, Cellars and Bee Houses, by Thomas G. Newman. This is a chapter from "Bees and Honey." Price, **5c.**

Food Adulteration; What we eat and should not eat. This book should be in every family, and ought to create a sentiment against adulteration of food products, and demand a law to protect the consumer against the numerous health-destroying adulterations offered as food. 200 pages **50c.**

Scribner's Lumber and Log Book.—Most complete book of its kind published. Gives measurement of all kinds of lumber, logs, and planks by Doyle's Rule, cubical contents of square and round timber, staves and heading bolt tables, wages, rent, board capacity of cisterns, cordwood tables, interests, etc. Standard book throughout United States & Canada. Price **35 c.** postpaid.

Fisher's Grain Tables for Farmers, etc.—192 pages, pocket form; full of useful tables for casting up grain, produce, hay; cost of pork, interest; wages tables, wood measurer, ready reckoner, plowing tables and more miscellaneous matter and useful tables for farmers and others than any similar book ever published. **40** cents.

Moore's Universal Assistant, and Complete Mechanic, contains over 1,000,000 Industrial Facts, Calculations, Processes, Trade Secrets, Legal Items, Business Forms, etc., of vast utility to every Mechanic, Farmer and Business Man. Gives 200,000 items for Gas, Steam, Civil and Mining Engineers, Machinists, Millers, Blacksmiths, Founders, Miners, Metallurgists, Assayers, Plumbers, Gas and Steam Fitters, Bronzers, Gilders, Metal and Wood Workers of every kind.

The work contains 1,016 pages, is a veritable Treasury of Useful Knowledge, and worth its weight in gold to any Mechanic, Business Man, or Farmer. Price, postage paid, **$2.50.**

Kendall's Horse Book.—No book could be more useful to horse owners. It has 35 engravings illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has recipes, a table of doses, and much valuable horse information Price **25c.** for either the English or German editions.

Quinby's New Bee-Keeping, by L. C. Root—The author treats the subject of bee-keeping so that it cannot fail to interest all. Its style is plain and forcible, making all its readers realize that its author is master of the subject.—**$1.50.**

The Hive I Use—Being a description of the hive used by G. M. Doolittle. Price, **5c.**

Novice's ABC of Bee-Culture, by A. I. Root—This embraces "everything pertaining to the care of the honey-bee," and is valuable to beginners and those more advanced. Cloth, **$1.25.**

King's Bee-Keepers' Text-Book, by A. J. King.—This edition is revised and brought down to the present time. Cloth, **$1.00.**

Langstroth on the Hive and Honey Bee.—This is a standard scientific work. Price, **$2.**

Blessed Bees, by John Allen.— A romance of bee-keeping, full of practical information and contagious enthusiasm. Cloth, **75c.**

Foul Brood; its origin, development and cure. By Albert R. Kohnke. Price, **25c.**

Extracted Honey; Harvesting, Handling and Marketing.—A 24-page pamphlet, by Ch. & C. P. Dadant, giving in detail the methods and management adopted in their apiary. **15c.**

Practical Hints to Bee-Keepers, by Chas. F. Muth; 32 pages. It gives Mr. Muth's views on the management of bees. Price, **10c.**

Dzierzon Theory;—presents the fundamental principles of bee-culture, and furnishes the facts and arguments to demonstrate them. **15** c.

Apiary Register, for SYSTEMATIC WORK in the APIARY. The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book. Prices: For 50 colonies, $1.00; for 100 colonies, $1.50; for 200 colonies, $2.00.

Deutsche Buecher,

Ueber Bienenzücht.

Bienen Kultur, oder erfolgreiche Behandlung der Bienen, von Thos. G. Newman. Dieſes Pamphlet enthält Belehrungen über folgende Gegenſtände—Oertlichkeit des Bienenſtandes—Honig pflanzen—Erziehung derKönigin—Füttern — Schwärmen — Ableger—Verſetzen—Italieniſiren—Züſetzer von Königinnen—Ausziehen—Bienen behandeln und beruhigen; weiter enthält es ein Kapitel, worin die neueſte Methode für die Herrichtung des Honigs für den Handel beſchreiben iſt. Preis 40 Cents.

Honig als Nahrung und Medizin—von Thomas G. Newman. Dieſes enthält eine klare darſtellüng über Bienen und Honig des Alterthums; die Beſchaffenheit, Qualität, Quellen und Zubereitung des Honigs für den Handel; Honig als Nahrungsmittel, angebend wie man Honigkuchen, Formküchelchen, Puddings, Schaumkonfect, Weine, u.ſ.w zubereiten kann; ferner Honig als Medizin mit vielen Rezepten. Es iſt für den Conſumenten beſtimmt,. und ſollte vieltauſendfältig über das ganze Land verbreitet werden. Preis 6 Cents.

Das Pferd und ſeine Krankheiten—Von B. J. Kendall, M. D., enthaltend ein alphabetiſch geordnetes Verzeichniſz der verſchiedenen Pferdekrankheiten, ſammt den Urſachen, Symptomen und der richtigen Behandlung derſelben; ferner, eine Sammlung werthvoller Rezepte. Preis 25 Cents.

THOMAS G. NEWMAN,
925 West Madison St., CHICAGO, ILL.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XIX. CHICAGO, ILL., DECEMBER 26, 1883. No. 52.

THE AMERICAN
BEE JOURNAL
Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

☞ We point with pride to the copious Indexes contained in this paper. They will be of untold value to those who bind the JOURNAL, or those who use Emerson Binders in which to keep the volume.

☞ "Fifty-two dividends a year from $2 invested." That is what every one will receive who subscribes for the Weekly BEE JOURNAL.

☞ The Rev. S. L. Stiver, of Bunker Hill, Ills., asks: "Will pure honey granulate? and if so, is it as nutritious and wholesome as the ungranulated?" Yes; nearly all pure honey will granulate on the approach of cold weather or before, and is not only as nutritious, but it is preferred by many for table use and medicinal purposes.

☞ As the reading season has come with the long winter evenings, it is just the time to read the various books on Bee-keeping. When renewing your subscriptions will be a good time to get a supply of such literature. See our club rate on Books with the BEE JOURNAL, on the first page of this paper.

☞ We have received the Catalogue and Price List of Mr. Elvin Armstrong, Jerseyville, Ill., for 1884. The Crown bee hive and supplies generally.

☞ We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.

☞ For $2.75 we will supply the Weekly BEE JOURNAL one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or in cloth for $3.00.

The Volume for 1883 is Finished.

With this number of the Weekly BEE JOURNAL, the volume for 1883 is complete! The work on it is done—the volume closed—the year ended—another "star" added to the galaxy of the bright luminaries of its existence!

The success of the Weekly BEE JOURNAL during the past years of its existence, has *far* exceeded the expectations of its publisher, and shows that the time had fully come when its existence was a public necessity. Who among progressive apiarists would now consent for a moment to go back again to a monthly? Echo asks, *Who?* and the echo reverberates the only reply.

It is a source of much congratulation to its friends, as well as its publisher, that it enjoys a reputation for reliability and integrity, of which but few of the publications of the world can boast.

We are quite willing to submit to the verdict of its ten thousand readers, as to how well it has sustained the promises made a year ago, that it would "continue to *lead* in all the qualities of our ever-advancing art, and maintain its high position as the most enterprising Bee Paper of the World." The thousands who have already volunteered their appreciation during the year, and testified of its practical value by their continued patronage, and those who now are showing their esteem by promptly renewing their subscriptions for the coming year (and with these substantial approvals send words of encouragement); all stimulate us to further dilligence in the prosecution of our life work. Its record, character, power and usefulness in the past, is its guarantee for the future.

We have already engaged an army of regular correspondents of the BEE JOURNAL for the year 1884, comprising the best apicultural writers of the present age, and many of the most practical and successful apiarists of the world.

As heretofore, the BEE JOURNAL will continue to be the medium for the promulgation of the best thoughts of the most advanced bee-keepers of the age—keeping abreast of the highest progress, favoring the freest discussion of all points of interest in apiculture, advancing progressive ideas and the newest practical conceptions and improvements.

Amid all the rush of correspondence at this season of the year, we will pause a moment to wish all our readers

A MERRY CHRISTMAS,
AND
A HAPPY NEW YEAR!

Honey Crop of France and America.

Mr. Jas. McKnight, of Capistrano, Cal., writes us as follows:

A friend of mine, Mr. Louis Dartigues, of this place, asked me to guess how many colonies of bees there were in France. Of course I could not do so. Judge of my astonishment when he handed me the enclosed strip taken from a French paper:

Colonies, 1,971,365; honey, 9,948,642 kilos.; wax, 2,845,749 kilos.; value of honey, 14,945,835 francs; value of wax, 8,752,299 francs; total, 23,698,134 francs.

Translated to our figures it is about as follows: Colonies, 1,971,365; honey, 21,887,000 lbs.; wax, 6,260,600 lbs.; value of honey, $2,989,167; value of wax, $1,750,460; total value, $4,749,627.

As we sometimes hear that the United States is the largest honey-producing country in the world, I would like to know what the figures of the last census gives, or how does it compare with the above?

The last census reports have not yet been published, but it is estimated that there are in the United States and the Dominion of Canada, about six millions of colonies of bees, and the honey crop is valued at about thirty millions of dollars. The wax product is valued at about two millions of dollars. Modern management produces less wax than with the old style of destroying the bees for the honey and wax.

CORRESPONDENCE.

For the American Bee Journal.

Michigan State Convention.

W. Z. HUTCHINSON.

SECOND DAY.

The meeting was called to order at 9 a. m. by President Cook, and then the Convention proceeded to discuss the "Selling of Honey."

C. F. Muth said that he had induced many manufacturers of tobacco, of cakes and cookies, of pickles, as well as packers of pork, to use honey in place of other sweets. If we keep our honey pure, there will be no trouble in disposing of it. He exhibited some excellent cookies or buns, in the manufacture of which, honey was used.

A. D. Benham: A confectioner in our town took my entire crop of 1,000 pounds of extracted honey to use in making cookies. He also had samples which were very much like those brought by Mr. Muth.

B. Salisbury spoke of the benefits of honey in pulmonary diseases.

Rev. L. L. Langstroth had a dear friend that was apparently near death's door from consumption, who was restored to health by small but frequent doses of honey. He considered basswood honey the best for lung diseases.

"Is Bee-Keeping Healthful?" was next discussed.

Dr. Mason said, no; bee-keeping is not healthful. My hands, at times hang almost helpless from the effects of bee poison. Almost every fall I am nearly disabled from the effects of the poison. If I keep away from the bees I am all right.

C. F. Muth: Get better-natured bees.

Dr. Mason: My bees are as good-natured as most bees, but bees delight in stinging me. While at Mr. Muth's apiary I was stung three times, but Mr. Muth knew nothing about it.

Rev. L. L. Langstroth: When I commenced bee-keeping, a sting caused much swelling, but in time this trouble passed away. Several years passed, during which I handled no bees, and when I again attempted it, I found myself more susceptible to the poison than ever, but by continuing to work with the bees, disregarding the stings, my former indifference returned.

D. A. Jones: When a hive is opened every frame should be moved along a little, and the whole hive disturbed before the first frame is lifted out, this disorganizes the whole of the bees, and starts them to eating honey, and the danger from stings is lessened.

M. H. Hunt: Honey is an excellent remedy, and is always handy.

Mr. Sheldon: Bee stings have cured rheumatism for me.

Dr. Mason: Bee stings never helped my rheumatism.

D. A. Jones: I have cured rheumatism and neuralgia, for the time being, with bee stings, but the next day it returned. By singing the hairs from the back of the hand and wrist, many stings will be prevented. The bees catch their feet in the hairs, if left on, become irritated and sting.

Dr. Rulison: Chloroform is an excellent remedy for stings.

Mr. Millard: I am afflicted with eruptions and boils, caused by bee poison.

Your humble servant (W. Z. H.) had in his mind the case of Mr. James Heddon, who suffers so much from the effect of bee poison as to be almost entirely prevented from handling bees, but, as many others wanted to talk, he said nothing.

"Exhibitions at the State Fair," was then discussed. Secretary Cutting gave a detailed report of his meeting the officers of the State Agricultural Society, inducing them to increase the premium list and put up a building expressly for the apiarian department. He then read the following upon the importance of making exhibits at Fairs:

Exhibitions properly conducted are educational institutions. I think it is conceded that to create a demand for anything is to bring it before the public in some form where the masses can be educated to its uses, and I know of no place where anything can be brought before the public, and its uses explained, as well as at State and County Fairs.

Where can you place honey to reach the eye of the consumer as well as at large exhibitions? Honey placed on exhibition at fairs, is seen by thousands every day; and when put up attractively, to please the eye, it creates a demand.

How often the exhibitor hears this remark: "I did not think of buying honey when I came here, but it looks so nice that I must take some home." If you put honey in a box, and put up notices all around, saying that you have honey for sale, and I dare say you will not sell a box a day; while the exhibitor opposite, who has a large exhibit, put up in an attractive manner, will sell large quantities every day.

You must be ready to explain away all existing prejudice, for you will find such every hour in the day, that seems foolish to you, because you have been educated to know better. I well remember one little incident that happened at our last State Fair. A party of ladies came along, when one asked the question: "What is that machine for? and the answer was, to make comb foundation for the bees to work on—at the same time showing them a fine specimen. The lady turned to the party she was with, and exclaimed: "There, didn't I tell you that honey was adulterated, for here is the very machine to make the comb, and there is the machine to fill it" (referring to an extractor). It took no small amount of talk to break down the prejudice.

To the supply dealer exhibitions are a fine thing. Bee-keepers know that there will be placed on exhibition a large collection of implements and supplies of all kinds, and they go to the fair to see what is new and what they can learn, and if you have a good line of supplies you will get many an order that you would not have in any other way.

Men get different ideas from what they read and what they see. You may describe an article, and the party you wish to reach does not get your idea of it, but the moment he "sees the article" it is different; he does not hesitate to buy it. You must bring your goods before the consumer if you expect to dispose of them.

Another important feature that is left out at our exhibitions, is lady bee-keepers. A few lady bee-keepers would help exhibitions greatly. They can arrange an exhibit much more tastefully than men, and the lady visitors will stop and talk with lady exhibitors much sooner than with men. Any woman can exert a great moral influence and render *our* exhibitions much more attractive.

I would earnestly appeal to every bee-keeper to come out next fall at our State Fair and make a grand exhibition. Do not hold back because you have not much to show; every one helps. Last year one man came with a single bee hive and received the first premium.

The Agricultural Society does not want to see one man fill the building, but it wants all to come. A building will be provided large enough to accommodate all. In no other way can you make the sale of honey so great as to make a fine exhibit at fairs all over the land. So I will say again: "Come one and all; bring what you can, and let us show our Mother Country that we, too, can have a great bee and honey show."

A. J. Cook: When I went to the State Fair, the President did not wait for me to come through the yard, but came out to meet me, and said that he was proud of the exhibit in the apiarian department.

D. A. Jones said that honey-shows increased its sale wonderfully. Two thousand two-ounce packages of honey were sold at 5 cents each, at our fair. These packages gave people a taste, inducing them to buy larger packages. One dealer bought them to give as Christmas advertisement. Honey-producers should not neglect this great educator of the people.

M. H. Hunt: I sold all my honey at the fair. Mr. Hutchinson sold some, and might have sold all of it if he had not held it above market price.

S. T. Pettit: Candied honey should be exhibited at fairs. Most bee-keepers exhibit their honey in the liquid form; purchasers carry it home in that form, and when it crystalizes they think something must be wrong, and fear that it is adulterated.

To revise the State Fair premium list, and urge its adoption by the officers of the Agricultural Society, the following were appointed as a committee: H. D. Cutting, D. A. Jones, Dr. Mason, Dr. Kazartee and C. F. Muth.

The President's address was then read by Prof. Cook, and was enthusiastically received. It was as follows:

THE OUTLOOK OF APICULTURE.

Brothers of the apiary, ladies and gentlemen:—

The Constitution of our Association makes it incumbent upon me to present the annual address by virtue of my office as President of the Society. In casting about for a theme suitable to this occasion, I can find nothing I deem more worthy than "The Outlook of Apiculture."

Before commencing a survey of the present status of our art, I pause for a moment to speak of an event which is of deepest interest to us all. Need I say I refer to the presence among us of our honored and revered friend and benefactor, whose invention alone made possible the mighty progress of our art; whose rare gift as an experimentalist, scholarly attainments and surpassing gift as a writer, gave to us the greatest work ever written on apiculture; whose grand character, transparent ingenuousness, child-like simplicity, and retiring modesty, teach us so graphically what the Christ spirit can do for man; whose great heart ever moved by the broadest charity, made him to bless, even those whose curses he bitterly felt. To know such an one, to look upon him, to grasp his hand, to hear his words of wisdom, bringing to us the treasures of a mind stored with the richest truths, and of a heart, too great to feel malice; and so large that it reaches out to aid even the least of us, all of this is an experience which we Michigan bee-keepers appreciate to-day. How greatly we are honored, we cannot now find words to express; but in all our future we shall remember this event, as realizing to us, a hope which we had never expected to see fulfilled.

A few years ago the cynics of our brotherhood told us that conventions were the enemies of our art, that they were worse than useless, and that to stimulate the growth of apiculture was to use the suicide's dagger. Now it is rare indeed to find a man so narrow as to declaim against association. While time has shown that with bee-keeping, as with every other business, increased supply brings a much greater increase in demand, which is further made potential for good, by bringing the increased energy and intelligence which numbers are sure to give. The business that booms, is the one that has among its patrons the talent, the tact, the energy and the genius of the country. Without conventions, we could not have inaugurated, and made successful our splendid exhibitions, which are sure to foster our art as few other things can. Those States whose conventions are ablest, and most frequent, are ahead. It is always so, with every art and at all times. County and District societies should send delegates to the State association, and the State to the Inter-State and National. Thus concerted action will be made possible; thus the thought and methods of the most progressive will become the property of the many. To be sure, we have our excellent periodicals, but they are only possible, as association inspirits bee-keeping; and, good as it seems and is to get the thoughts and methods of our able apiarists through the press, it is not like personal intercourse, and word of mouth. Conventions are a powerful educator. No single bee-keeper becomes abler and better prepared to do his work well, without benefiting the whole fraternity.

We increase our art, only as success shows it worthy. I may praise our business with a voice that would do honor to an auctioneer, yet that will influence little unless my neighbors see evidence that the almighty dollar puts in an appearance. Those who are energetic, willing to work, intelligent and willing and eager to learn, observing, persevering and attentive to their work, will rarely ever fail in apiculture. Those who lack these qualities will be left behind before they get far enough to meet great loss; so little mischief is wrought even if some are induced to adopt this business, and because they lack the elements of success, fail. Usually they gain enough added intelligence to more than pay for the time and capital expended.

Another falacy, as I think, which some few of our apiarists are loudly proclaiming, is that apiculture is only for the specialist. Why, gentlemen, our brothers in horticulture and agriculture are free to admit that they owe more, in the way of real progress and advancement to amateurs than to specialists. I know that apiculture is no exception. Our honored guest was an amateur when he conferred the greatest boon upon our art. Long, Demaree, Clute, and a host of others of our best bee-keepers, are amateurs. I am free to say that three-fourths of the honey product of our State is produced by men with whom apiculture is only an avocation. I can name a score of bee-keepers, whom I know personally, who are farmers, lawyers, doctors, who keep hundreds of colonies of bees, and many of whom, not only get large returns of honey, but winter each and every year with entire success. When our specialists are all equally successful, then they may cry hold! enough! with more justice.

An indication that the new recruits in apiculture will exalt rather than degrade the business, is seen in the fact that many are calling for instruction in this line. Few studies at our Agricultural College win more earnest study and real enthusiasm than does entomology, which embraces quite thorough instruction in apiculture. Last year we had a student from England, and this year one from Texas, who came especially for the bee-culture. The fact that Messrs. Jones, Heddon and Clute have respectable classes, shows that there is a call for more knowledge. We can but wish God-speed to all of these gentlemen in their efforts. Special training is most desirable to the would-be apiarist. To be with such efficient bee-keepers for a season will give a vantage ground that can hardly be appreciated till enjoyed. The practical apiarist will be more proficient if he has had the science of entomology and physiology, and other cognate studies, but if he cannot because of age or circumstance take so much time, let him by all means study and work for a season with some good apiarist. Such a course will never be regretted.

The past season has shown that we can procure nearly as much honey in small as larger sections. It would also seem that with the proper arrangement and care, we have no need of separators. That there will ever be call for sections smaller than 4¼ inches square, sufficient to warrant their adoption, at the added expense in time and money which they demand, I much doubt. I secured quite an amount of honey the past season in the small sections—half-pound sections—but I found those who bought it, thought these smaller sections in no wise preferable to the common one-pound section. It is reported that Mr. Heddon is going to adopt the smaller size exclusively another season. It may pay him to do so; but for the most of us, I think, we shall be wise to adhere to the one and two-pound sections.

Another question in which we all take a deep interest, is the "New Bees." I have had no experience with the Cyprian bees, but I think more and more of the Syrian. I find no trouble to handle them, and take my large class of students, new to the business, right into the apiary. These 30 or 40 students daily manipulate the bees, doing everything that the bee-keeper ever needs to do, and rarely ever get stung. I find that the comb honey of the Syrians is excellent, that the bees go readily into the sections. We did not get all our sections so that they could be crated without the use of the separators; but I am not sure but that it was more our fault than the fault of the bees. They are very prolific, breeding even when there is no nectar to gather, and they often gather when other bees are idle. I have this fall secured from Mr. Frank Benton, a Carniolan queen, and shall try crossing the Carniolans with the Syrians. Perhaps we can thus secure a strain with the amiability of the Carniolan, and the business of the Syrians.

Our exhibition the past autumn, thanks to our able secretary, Messrs. Hutchinson, Hunt and others, was very fine, and reflected great credit on our Association and our State. These shows can but do immense good. They show what bee-keeping is, and develop a market as nothing else can. I suggest that we reappoint our committee, and that we ask for still larger premiums, a separate hall in a convenient and accessible location, and that honey in small packages be sold, all through the fair. A neat little pail of honey or comb section thus sold on the fair ground, will influence the market all over the State.

"Pasturage for Bees" is another subject that may well receive our attention. Though it may not be a demonstrated fact, there can be hardly any question but it will pay to plant for bees. Every bee-keeper should scatter motherwort, catnip, figwort, spiderwort, sweet clover, and Rocky Mountain bee plant seed in all the waste places about the apiary. These are harmless plants to the farmer, and, as their presence adds to the wealth of the country, he is a benefactor who causes their introduction and spread. They are more beautiful than May-weed, neetles, or smartweed, and may well supersede these cumberers of the ground. It is well worth while, too, for our bee-keepers to stimulate the growth of alsike clover. Let us sow it ourselves, and furnish it to our neighbors that they may plant it. Let our bee-keepers see that the ladies have abundance of mignonette in the garden; and ever bear in mind that raspberries gives us a most luscious fruit, which costs very little, and more—furnishes the bees with nectar that equals that of the clovers and basswood, when converted into honey. To be sure, the raspberry, white and alsike clover, and the tulip, comes at about the same time. Yet, who has not noticed that after the clovers will utterly fail to attract the bees, then the raspberry blossoms will be ringing with the joyous hum of our pets of the hive. Plants, like insects, are very susceptible to changes in the weather, and vary in the degree, which the weather effects to modify their functional activity. So success will often vary exceedingly with the greater or less number of honey plants, even though all are in bloom at the same time. In this connection, we all should observe the plants in reference to the soil on which they grow. I have found that while Rocky Mountain bee plant and mignonette do well on light sandy soil, figwort and spider plant do very poorly. It is well to note the natural soil of the plant, and if we wish to change its habit, do it gradually, that the transition be not too violent. Figwort grows naturally on rich, heavy, moist soils. To change it at once to lightest land, is a very abrupt transition.

There are few topics, at present, in which we Michigan bee-keepers are more interested than in that of "foul brood." Probably there is no State in the country in which this fell malady has gained so large a foot-hold. I have received specimens from Lenawee, Jackson, Livingston, Wayne, Washtenaw, and Montcalm counties. Surely, it behooves us all to become thoroughly conversant with this terrible plague, that we may be ready to grapple with it at its first appearance, should it come among us. The fact that it has jumped the past season from the south to the north part of the State, shows that we are all in danger. As Mr. Muth, who is the advocate of salicylic acid as a cure, and Mr. Jones, who has faith in, and practices the starvation method of treatment, are to be with us, I will only venture the remark that very likely the rank and file can do no better than to keep a very close watch, and at the very first appearance, practice the extermination method. Experts may cure. The novice will possibly save money and patience if he stamps it out, at the outset, by cremation or burial.

Michigan now has probably the most active and influential State organization in the country. I think she has the greatest number of local organizations (she now has seven) of any State. We need not wonder then that the editor of one of our largest and most influential bee papers, one of the very best, in fact, in the world, states that he has more subscribers in Michigan than in any other State. Possibly we now have enough local organizations, though it would seem that there might be room for another West of Battle Creek, on the Central. There are now three along the Central railroad, two on a line with Lansing, and two on the D. & G. H. railroad. Besides the one in the southwest, yet to be, there will soon be need of one still further north.

It is certainly for our good, and the general good of our craft, to keep these associations alive and vigorous. As a preventive of "foul brood," I would rather have a wide-awake local society, than all the other methods. It would give the knowledge to diagnose the evil, and would make known all the remedies, and would give the wise discretion in a choice and application of them. Let us see to it that these associations are well sustained, and are kept in close relation with this our State society.

It is a little late to speak of wintering, yet it is always an interesting theme to the apiarist. I will only say that I believe that he who cared well for his bees last autumn, gave them sufficient stores, and has them in a proper cellar, has little to fear. Sugar may be better for winter—surely is better than some honey. That it is better than most honey, I do not believe. Pollen may not, usually will not do any harm. Yet I do not hesitate to say that it is safer to have it omitted in provisioning our bees for winter. This conclusion I came to after a trial of several years. I could theorize as to the cause, but consider the fact more important.

I hope and trust that this will be one of the most interesting and valuable meetings we have ever held. I hope that in our selection of a place for our next meeting, we will go where we are wanted, that proper pains may be taken to thoroughly advertise our meeting, secure a hall, and arrange all the necessary local details.

A. J. COOK.

The election of officers resulted as follows: President, W. Z. Hutchinson; Vice-Presidents, R. L. Taylor, James Heddon and B. Salisbury; Secretary, H. D. Cutting; Treasurer, T. M. Cobb.

Mr. Langstroth then remarked that he had been so kindly received that he felt some embarrassment in speaking. He had made nothing by his invention, but he would rather have the good will of his fellow-men than to be the possessor of untold thousands, made at the expense of others. He spoke of his passionate love for insects in his boyhood, giving many amusing illustrations. He had brought flies back to life that were apparently dead from drowning; had attempted to start ant hills; and was punished for wearing out the knees of his pants in examining ant hills, etc. The reading of Virgil only made him the more cautious, and led him to examine things for himself. Had he possessed books, it might have been the worse for him, as he might not have investigated so closely He then gave a history of the invention of the movable frame hive, spoke of the honored dead, of his sickness, etc.

At the close of Mr. Langstroth's address, the building fairly rang with applause.

The following was then passed: *Resolved*, That the editors of the several bee periodicals, and writers on apicultural subjects, be requested to use the word Langstroth in reference to this hive of every style of frame; to say, for instance, "The Simplicity Langstroth," and not the Langstroth.

"Honey-Producing Plants" were discussed, and the outlook was quite favorable.

Dr. Mason: Sweet clover is my favorite honey-plant. There are acres and acres of it in Toledo, even in the busy streets, and one who has never seen it, has but little idea how luxuriantly it grows. The wagon wheels run against it, and scatter the seed. A neighbor of mine obtained 1,000 pounds of surplus honey from sweet clover, and it was gathered quite late in the season.

T. F. Bingham: Sweet clover may be very fragrant when in bloom, but it is no ornament to the streets of a city. Look, for instance, at the streets of Chicago.

Prof. Cook: It is not an ornament in the fall, but neither are other noxious weeds that furnish no honey; if we must have weeds, let them furnish honey.

The question was asked—"Do queens mate more than once ?"

Dr. L. C. Whiting: I have watched queens and seen them fly and return with the evidence of having met the drone, and in a few minutes fly and mate again. I had one queen that flew and mated five times before commencing to lay.

Rev. L. L. Langstroth: I, too, have seen the same thing, but have always thought that such queens were not really and fully fertilized until the last time they flew.

The next subject was "Wintering."

Mr. Gillett: I think that early preparations for winter is important. I lose the most bees among those that are packed late in the season.

A. Keoppen: My hives are double-walled, and filled with tow. The bottom-board is made in the same manner.

R. L. Taylor: I have wintered my bees successfully two winters, in the cellar. They occupy a separate apartment, and a furnace gives an abundance of ventilation. The temperature is kept at about 40°. Those heavily packed out-of-doors, suffer from dampness. Strong colonies are more apt to breed, and thus bring on dysentery.

Prof. Cook winters bees successfully in a cellar where the water often stands 8 inches deep.

Mr. Benham: I prefer cellar wintering; but taking them out too early in the spring is detrimental.

T. C. Pollock: I prefer cellar wintering. I leave the cellar open until apples freeze near the door, then close it up. If the outside temperature rises, it will not much affect the cellar if it is kept closed.

Mr. Emigh: I winter my bees in the cellar, and my losses are slight. In the spring I set out one colony, and when that begins to bring in pollen, I put out the rest. My cellar is ventilated by a pipe connected with the stove-pipe.

D. A. Jones: As near as I can recollect, the consumption of honey, per colony, in my cellar, is about 6 pounds. Out of doors it requires 10 pounds more. Carrying bees out for a flight, always brings on dysentery. My bees, confined six months, came out all right. When bees are found clustered tightly, all is well.

Dr. Mason: I agree with Mr. Jones that, when bees are clustered tightly, they are all right. I have wintered bees successfully in different kinds of cellars, and I do not care whether the cellars are wet or dry. Bees that die in the cellar do not have the right kind of food; and the less of any food they consume the better.

Mr. Muth: I want my bees to have from 20 to 30 pounds of honey for winter, and I care not for pollen. I do not think it causes dysentery.

Mr. Jones: The mice pulled the covers from some of the colonies, in one of my bee houses, and those colonies wintered the best.

Prof. Cook: My experience has been the opposite.

Rev. L. L. Langstroth: Moving the combs apart is a great help in wintering. A warm covering, something like a woolen blanket, is a good protection.

Adjourned till 1:30 p. m.

AFTERNOON SESSION.

The Convention was called at 1:30 p. m. President Hutchinson in the Chair. The first topic brought up was: "Comb Foundation." The discussion was preceded by an exhibition of the Given press, and the manufacture of foundation. The sheets of wax had become so warm that several had stuck together, and in making up full sheets, several pieces were put together.

Mr. Taylor: I use Babbitt's concentrated lye to keep the wax from sticking to the dies. Wax works best in a temperature of from 70° to 80°. Lye is not disagreeable to bees, as they often come out and sip it up while I am at work.

Prof. Cook: The foundation made here last spring by Mr. Taylor, was certainly very fine, but as some prefer the Van Deusen foundation, and as Mr. Van Deusen is here, we would like to hear from him.

Mr. Van Deusen exhibited a large sheet of foundation. He said that many objected to it on account of its hardness, but such should remember that the heat of the hives soon softens the wax. Others objected to the flat bottoms, but he thought this no more objectionable than the round cell of the Dunham.

Prof. Cook: The Pelham will need mention, especially as it is cheap.

C. F. Muth: I have tried the flat-bottomed and that made by Chas. Dadant, and I see no difference.

Question—"What kind of bees are the most gentle?"

D. A. Jones: Italians are the most gentle; but Syrians crossed with Italians are the best honey-gatherers. There is a difference in the Syrians—from some localities they are gentle, from others they are not. Those from Mt. Lebanon are the best. I prefer to mate Syrian queens with Italian drones.

On "Finding Black Queens," D. A. Jones said: Shake all the bees from the combs into the hive, and set the combs to one side, shake the bees to one side of the hive, and as they start to spread out, and set up their buzzing, the queen will come to the top and start out with those long strides of hers, and she can easily be found.

The question was asked: "Is it true that bees can be wintered on from 6 to 10 lbs. of honey per colony?"

D. A. Jones: Yes, it is true, but they will consume large quantities after being placed upon their summer stands.

Prof. Cook: We have wintered a colony upon 3 pounds.

On motion of H. D. Cutting, W. J. Baxter, of Janesville, was made an honorary member.

Question—"Shall we influence people to become bee-keepers?" Some said yes; others, no. D. A. Jones gave several reasons in the affirmative. Said that we could not produce as much honey as we could sell.

Prof. Cook agreed with Mr. Jones.

On the "Prevention of Bee Stings," D. A. Jones said: I have found that a person wearing black clothes is more liable to be stung. "Fuzzy" clothing is the kind to wear if you want to be stung. Something smooth like duck, is the best to avoid stings. The first thing a student is told to do, is to singe the hair from his hands and wrists. If you wear a veil you must wear it constantly. If one operator wears a veil, and another in the same yard does not, the one without a veil will receive more stings than he would if the other did not wear one. A straw hat with a wide slouching rim is the best with which to avoid stings.

Adjourned till 7:30 p. m.

EVENING SESSION.

The meeting was called to order at 7:30 p. m., by President Hutchinson, who remarked that Dr. Mason had a comb on exhibition, one-fifth of which was paraffine, and he knew that the Doctor would like to talk about it.

Dr. Mason: I do not know that there is much to say. I tried mixing paraffine with wax, and making the mixture into foundation. Alternate frames were filled with this kind of foundation, and the other frames with pure wax foundation. The bees drew them out and used them just alike. I could see no difference. Myself and neighbors have used such foundation for two years. Paraffine can be obtained whose melting point is about like wax. The time is coming when something must be substituted for wax. I would use it for comb honey if certain that it was a fine article.

D. A. Jones: To detect paraffine or tallow in wax, keep pure wax and the suspected wax at the same temperature, gradually raising the temperature, and that containing the other substances will melt first. I have tried paraffine, but could obtain no satisfactory results.

J. Van Deusen: I have looked for a substitute for wax. Thought celluloid might answer, but found that it cost $2 per pound. I found paraffine that would stand a test of 140°, but even that would not answer.

Dr. Mason: I have had paraffine that it became necessary to break into small pieces in order to have it melt as soon as wax.

J. Van Deusen: I presume it would be possible to obtain paraffine whose melting point would be high enough to answer when wires are used.

Dr. Whiting: I have used foundation containing paraffine, and it gave me much trouble. The wax made from such combs might cause the purchaser of it some trouble.

S. T. Pettit: We must soon have a substitute for wax, why discourage trying such things?

D. A. Jones: I have tried almost everything; muslin covered with wax was a failure. An expensive quality of linen paper covered with wax has been a success to a certain extent. Figures, writing, or drawing can be made upon the paper before coating it with wax, and they will show after the comb is drawn and finished. The trouble came in when the bees attempted to thin the septum.

R. L. Taylor had tried mixing resin with the wax, but it was a brilliant failure. The bees neglected it for a long time, and then built drone comb over it.

The report of the committee on resolutions was passed unanimously. It gave thanks to Rev. L. L. Langstroth and visitors from other States; to the proprietors of the hall; the railroads for reduced fares; the local papers for notices, etc.

The Convention adjourned to meet at Lansing upon the second Wednesday after the first Tuesday in December, 1884.

For the American Bee Journal.

Straight Worker Combs without Using Comb Foundation.

G. M. DOOLITTLE.

To have all our combs built true in the frames, so that each comb is as true as a board, is certainly worth working for, to those who handle their frames. If frames are not to be handled, then a box hive is as good as one with frames in it, for all practical purposes. The object of frame hives is to allow of a better control over the inside of the hive than could be done with box hives, and only as these frames are movable, in the fullest sense of the word, is this object secured. We often see combs so bulged or crooked in the frames, that they will not allow of their being exchanged to different parts of the hive, or from one hive to another; in which case the hive containing them can scarcely be called a movable comb hive.

To tell those wishing to know how worker combs can be secured, built straight and true within the frames without the aid of comb foundation, is the object of this article. I expect many will think it "mistaken economy" to try to get combs without using foundation, but many cannot afford to buy it, and a few, myself among that number, believe that combs can be built as cheaply as the foundation can be purchased and gotten into combs. In a future article I propose to discuss this matter regarding the economy of comb foundation, therefore I will say nothing further on the subject here.

As a starting point toward straight combs, I use a wax guide on the under side of the top-bar of the frame, which is secured by making a straight edge of hard wood, 7-16 thick by 1 inch wide, and $\frac{1}{4}$ inch shorter than the inside of the top-bar of the frame. This straight-edge is nailed to a wide board, and the board so fixed that it inclines enough for the melted wax, (which is to be used to make the guide) to run along the top-bar freely. With a wet sponge, moisten the straight-edge, lay the frame on the wide board with the underside of the top-bar pressed against the straight-edge, when a little wax is turned from a spoon into the upper end of the V shaped trough (which is made by the top-bar of the frame and the straight-edge,) and allowed to run down the whole length of it. Now lift the frame and you have a nice wax guide for the bees to start their comb on. By keeping the straight-edge wet, the wax will not stick to it, and by using a lamp under the dish of wax, it can be so regulated that the wax is kept at the right temperature all the while. In this way guides can be put on very rapidly.

While I have found a guide of some kind an absolute necessity (the above being the best,) I have also found that no guide can always be depended upon, for bees are sometimes very obstinate, and will leave the guide so as to build crooked combs if they do not go directly across the frames. Consequently, it pays the apiarist to look at each colony hived on empty frames while they are building comb, as often as once in 3 days. If any combs are found going wrong, they can be bent back in line very easily, and after the hive is once filled, they are good for a long time, as I never saw one that I would discard on account of age.

The readers of the BEE JOURNAL are aware that I prefer natural swarms, and to best illustrate how I secure combs such as I desire, I will give my management of a swarm. As all my queens have their wings clipped, the swarm is hived by letting them return, previously moving the old colony to a new location and setting the new hive, containing the full number (9) of frames, in its place. In two days I open the hive, and usually find that the bees have made a start in 5 frames. These 5 frames are placed together at one side of the hive, and a division board is placed next to them. This throws the full force on these frames, and they will soon fill them with straight worker comb as a rule, especially if a few sections are placed over them (as there always should be), so that if any drone comb is built, it can be done in the sections. This also gets the bees at work in the sections quicker than any way I know of. If you get these 5 combs built straight, you will have no trouble in getting the rest so, as they can build them no other way, if placed between two of those already built. If every comb is straight and all worker, such a colony will be a profitable one, and if each colony has such combs, *all* will be profitable.

No apiarist if he has not more than 3 or 4 colonies, should consider them in proper working order until each comb is a straight worker comb. There is no need of having hives half full of drone comb, and so crooked that they cannot be handled. If we do things at the right time and in a proper manner, our bees will more than pay us for all time spent on them.

Suppose that, instead of working as above, we hive swarms without paying any further attention to them. Swarms issuing when honey is very abundant, will build comb very rapidly, filling their hive in 8 or 10 days, in which case their combs will be apt to be crooked, and at least $\frac{1}{3}$ drone or store comb, which is good for nothing for rearing workers the next season; but is an actual damage, as the drones reared in them will consume a great part of what the workers gather. Such colonies will be unprofitable ones, either for rearing bees or storing honey, just so long as the comb is kept in that condition.

In conclusion, I will say that I have never used 10 lbs. of foundation in brood frames since I have kept bees, but have built my combs as above, and until I am better satisfied that comb foundation pays than I have been from past experiments, I expect to so build them in the future; hence I am not preaching what I do not practice. All I have to recommend the above, is the success I have attained with it, and if any think that it is not "the right way to work," they can pass this article by, the same as if it had not been written. Still I should like to have all the advocates of foundation try one colony as above, by the side of one hived on comb foundation (both hived at the same time), both of which are to be worked for comb honey. Keep the honey each produces separate, and add to the one building its own comb, enough to cover the cost of the foundation used by the other, and see which comes out ahead.

Borodino, N. Y.

For the American Bee Journal.

Syrian Bees as Breeders.

W. Z. HUTCHINSON.

On page 643, Mr. Fayette Lee takes exceptions to some of my statements in regard to Syrian bees. Please allow me to explain. I do not judge of the Syrians' viciousness solely from my own experience, nor from Mr. Lee's, or Mr. L. L. Lowmaster's, or Prof. Hasbrouck's, or Prof. Cook's, or Mr. Jones', or any other single individual experience, but I look at the evidence in the aggregate. When there are more than 90 practical bee-keepers gathered together, as there was last October at Chicago, and only *one* of that number has had gentle Syrians, I consider the fact significant. Mr. D. A. Jones himself admitted, at our late State Convention, that the Italians were more gentle than the Syrians, but said there was a difference in the different strains of Syrians, those from Mt. Lebanon being the most peaceable.

Mr. Jones is a queen breeder and a producer of extracted honey, and prefers a cross between the Italians and Syrians, while I make the production of comb honey a specialty, and prefer a cross between the Italians and Germans; we both have good reasons for our preferences.

In regard to their not properly ripening and sealing their honey, did I not explicitly say, "I am aware that this complaint against them is not universal;" but those who are interested in this matter, should turn to the report of the Northwestern Convention for 1882, and read the testimony of E. J. Oatman, upon the point. This point would not be so serious in working for extracted honey.

Perhaps the statement that they will "rear brood so long as a drop of honey remains in the hive," needs qualifying to mean that they will do so only in warm weather. I certainly did not wish to convey the idea that they would continue breeding after cold weather had commenced, but that they would breed from early spring until late in the fall, whether honey was coming in or not.

I have no desire to tear down nor to build up the reputation of any bees, neither do I enter any controversy upon any subject for the sole purpose of defeating my adversary; my only object is to arrive at the *truth*, and, if in so doing I am "beaten" in my argument, I shall feel grateful to my opponent for pointing out my errors.

Rogersville, Mich., Dec. 15, 1883.

For the American Bee Journal.

"The Pollen Theory"—Facts.

J. M. SHUCK.

Having given the winter condition of bees very close attention for ten years last past, I wish to add to Mr. Kohnke's article in No. 50 of the BEE JOURNAL, the following facts:

1. I have observed that bees do attempt to consume pollen during the winter, when not rearing brood. Mr. Doolittle will here arise to ask how I know they do. I will answer by asking him how he knows his bees eat honey during the winter. I know they eat pollen because it is gone from the cells. I know they eat it, for it is found in their excrement. I have observed that they not only eat pollen when driven to it, but that they attempt to eat the wax. I have repeatedly seen combs thus mutilated.

2. I have seen queenless colonies affected with diarrhœa where honey was short and pollen present; these could not have been rearing brood.

3. I have known queenless colonies, and colonies with queens confined, on granulated sugar syrup, within their hives, out-of-doors for five months, including the worst winter weather; then come out dry, bright, and no sign of diarrhœa, and have seen them do nearly as well on good honey.

4. I have seen bees wintering on ordinary honey stores after long confinement, void their excrement on the combs within the hive, and pollute them as we all know they do without seeing them.

5. I have seen bees wintering on pure cane sugar stores after long confinement, void their excrement over the combs without pollution, it being thin and as clear as water; I have seen this day after day, and have never observed any evil results from it.

Probably T. F. Bingham suggested this pollen theory some 8 or 9 years ago; I think so, but cannot prove it. I know that James Heddon has slashed right and left about this thing for some years, and lately G. M. Doolittle calls for the facts. Lets have them, and be done with it.

Des Moines, Iowa, Dec. 12, 1883.

SELECTIONS FROM OUR LETTER BOX

Packed on Summer Stands.

Last spring I had 15 colonies of bees. Three of them were queenless. I doubled up 4 of the others, so that I had but 10 good working colonies. The season was wet, cold, and unfavorable for rearing and fertilizing queens for my queenless colonies; so I ordered some queens from Kentucky, but did not get them until about the first of July. I unpacked my bees on April 25. One swarm came out April 30; I hived it on 4 frames of comb foundation, and it gave my 45 pounds of honey in two-pound boxes. My bees produced 607 pounds of honey in one and two-pound boxes, and 147 pounds of extracted honey, making in all 754 pounds of clover honey. August was so dry that I got no honey after July. My bees increased by natural swarming to 27 colonies, which I packed for winter on the summer stands, each having 33 to 40 pounds of good clover honey. WM. MORSE.

Rockford, Ill., Dec. 15, 1883.

Bees Starve in the Midst of Plenty.

I would like to give an instance of how easily bees may be starved with plenty of honey near them. A friend of mine had neglected to take the honey boxes off his hives, until about Dec. 1. While removing them, he found where the bees in one hive had taken up their winter quarters in the surplus arrangement; he undertook to drive them below with smoke, but as they did not go readily, he took the honey out, and as there was an abundance of stores below, he supposed they would be all right. But what was his astonishment on opening the hive, a few days later, to find the bees all clustered in the box as natural as life, but cold and stiff in death's embrace. This was a strong colony, and came through the cold winter of 1882-3 on the summer stand, without any protection. I would say the mercury only indicated 10° below freezing, when the bees starved. S. J. YOUNGMAN.

Cato, Mich., Dec. 15, 1883.

Wintered on Sugar-Candy.

On Nov. 20, 1882, I put into the cellar 23 colonies in Carey's improved hives. I took them out on April 20, 1883, all in good condition, except one which was queenless, which I put with two weak colonies; that left me 22 colonies, spring count. The season was cold and wet. I started queen-rearing on June 1, when the bees were at work on raspberry and white clover. I made 60 nuclei, and reared 100 queens. I sold 40 of the nuclei and 75 queens. I extracted 700 lbs. of white clover honey, and had 300 lbs. of comb honey. I have 42 colonies of Italians, and 38 colonies of blacks, which I bought this fall. These I put into the cellar on Nov. 15; they were generally light, on account of early frost. I gave each 10 lbs. of candy made from granulated sugar and honey (25 lbs. of sugar and 5 lbs. of honey), which makes the best candy I have tried for winter stores. I like it better than honey. The bees do not come out gorged, and have the dysentery in the spring. I keep the cellar as near 45° as possible, and have only one ventilator (a 6-inch stove pipe). Since I tried this method of wintering, I have lost but 8 colonies all told, in 5 years. A. A. BYARD.

West Chesterfield, N.H., Dec. 17, 1883.

To Bee-Keepers of Iowa.

I want to call together all the bee-keepers of the Cedar River Valley and surrounding territory that may be interested in forming an organization in the interest of modern bee-keeping, and the production and marketing of honey, to meet at Waterloo, Iowa, Feb. 13 and 14, 1884. Do not wait until the organization is formed, but come along and help organize it. Help us make the start, for we need an organization of this kind in this vicinity. Among the prominent bee-keepers of this section, who are anxious to form an association, I may mention J. W. Spaulding, of Charles City; John Bird and Chas. Tracy, of Nashua; O. O. Poppleton, of Williamstown; A. J. Norris and E. A. Starks, of Cedar Falls; J. M. and A. Bennett, of Waterloo; L. L. Triem and Dr. Oren, of La Porte; Samuel August, David Thayer and James Ralston, of Vinton; Robert Quinn, of Shellsburg; Thos. B. Quinlan, of Cedar Rapids; E. A. Sheldon and A. R. Blood, of Independence; J. K. Oren and George Black, of Brandon; Wm. Hunt & Son, of Centre Point. All the above named are interested, and a great many more not mentioned, no one of whom have less than 50, and from that up to 300 colonies. We extend an invitation to all outside of this territory, who can, to meet with us. I have mentioned Waterloo, so as to make it central from all directions, and I will send a notice to each of the county papers along this valley, one or two weeks before the time of the meeting, and try and make arrangements with the hotels for reduced rates during our stay. Remember, bee-keepers, "united we stand, divided we fall." H. O. MCELHANY.

Brandon, Iowa, Dec. 15, 1883.

Wintering on the Summer Stands.

My report for 1883, is—a light crop. I commenced in the spring with 35 colonies—increased 66 per cent. I obtained 2,150 lbs. of extracted honey, and have some 300 lbs. left in the surplus combs for spring stimulating. They winter on summer stands, part in 2-story hives with the top story filled with oat-straw, and part in one story with no protection, except a quilt and 5 thicknesses of paper spread on the frames, with a tight-fitting cover. I formerly wintered my bees in the cellar, and prefer the cellar for a cold winter; but I prefer the summer stands for a warm winter. A. S. EDSON.

Martinsville, Mo., Dec. 11, 1883.

Fair Honey Harvest.

Bees have done well in this part of the State, during the past season, especially the early part, which was very good up to the first of July, when the dry weather cut off the flow for the season, so far as surplus was concerned. The bees gathered enough honey to keep up brood rearing and enough for winter stores, with those that took interest enough in the business to take care of their late swarms and return them to the parent colony. But those that were hived in empty hives did not gather enough, and they will be numbered with the dead when spring comes. My 34 colonies of bees are in winter quarters in good condition, and with honey enough to last until fruit bloom. GEO. COLE.

Freeport, Ind., Dec. 18, 1883.

Got only half a Crop.

As long as I keep bees I never want to be without the BEE JOURNAL. Bees did not do as well here last season as the year before. I think I shall get about half a crop, compared with the season of 1882. I had 38, spring count—increased 4; 42 this fall (I worked against increase); all are well supplied with honey now. I have sold my comb honey at 16 cents mostly, and extracted at 12½ cents. My crop will be about 2,000 lbs., of which I still have ⅓ on hand. My supplies came so late that I have them all on hand for next year; they were 2 months coming, from the time I ordered them. Weather is very pleasant here—more like spring than winter, so far. Bees were flying nearly every day. I have 3 colonies that I have taken from the neighbors that were going to kill them. I have for several years took such, and have always wintered them as well as any. I took 13 colonies last fall; doubled them down to 6; I gave them frames from my other colonies, of sealed honey, and they are all right for winter, just the same as any colony. I use the Langstroth hive and am well satisfied with it. W. H. GRAVES.

Duncan, Ill., Dec. 14, 1883.

Convention Notices.

The 15th annual convention of the Northeastern Bee-Keepers' Association will be held in the City Hall at Syracuse, N. Y., on the 22, 23 and 24 days of January 1884.

This will be the largest and most interesting convention of bee-keepers ever held in America. Many of the most scientific apiarists in the country will take part in the discussions. The programme is completed, and comprises all the interesting topics of the day. The question box will be opened each day, and the questions answered. All are invited to send in questions.

Implements and other articles of interest for exhibition will be received and properly arranged. It will pay any bee-keeper to go a thousand miles to listen to the discussions. By hearing and seeing, you will obtain much more knowledge than by reading. Five hundred bee-keepers will be in attendance. Reduced rates of board at hotels have been secured. All are invited.

Geo. W. House, *Sec.*
W. E. Clark, *Pres.*

☞ Notice is hereby given that the Nebraska State Bee-Keepers' Association will meet in annual session at Lincoln, Neb., Wednesday, Jan. 9, 1884, at 2 p. m., in the Y. M. C. A. rooms on Tenth street, between Q. and P., just east of the Government Square.

We have the promise of some eminent apiarists from other States to be with us, and also expect to have one of the largest displays of apiarian supplies ever gathered together in the State. Each person attending, is requested to bring something to exhibit or show, to the edification of bee-keepers and others. Past members are earnestly requested to renew their membership, and all others are cordially invited to come in with us.

The ladies having been well represented at our past meetings, we certainly expect a larger attendance this session than ever before. All those not attending will surely miss a good time, for we expect the largest gathering, and also the most enthusiastic meeting of practical bee-keepers ever held west of the Mississippi river.

We have succeeded in making very satisfactory hotel arrangements. Two dollar hotels have offered $1 rates. All bee-keepers desiring to attend can obtain certificates entitling them to excursion rates over the B. & M. and U. P. railroads by applying at any time previous to Jan. 6, to M. L. Trester, Secretary of Nebraska Bee-Keepers' Association, Greenwood. Please apply immediately.

M. L. Trester, *Sec.*
T. L. Van Dorn, *Pres.*

☞ The annual meeting of the Indiana bee-keepers will be held at Indianapolis, Jan. 15 and 16, in the Agricultural rooms corner of Tennessee and market streets. A cordial invitation is extended to all.

F. L. Dougherty, *Sec.*

☞ The Ohio bee-keepers will hold their annual convention in Columbus, O., Jan. 14, 15 and 16, 1884. All interested in bee-culture are invited. The following subjects will be discussed; "How to winter bees successfully." "Are the new races of bees a success?" "What can we do to prevent adulteration of honey?" "How to create a home market for honey." "How many colonies can be kept in one locality?" "Can we do without separators?" "Which are best, deep or shallow frames?" "What shall we do with second swarms?" "How many brood frames are necessary in a hive?" "Which is the most salable section, one-half, one or two pounds?" "Is it advisable for all bee-keepers to adopt a standard size of frame?" "What is the most desirable width of sections?"

The above questions will be discussed by eminent men, such as Rev. L. L. Langstroth, Dr. Besse, S. D. Riegel, C. F. Muth, A. I. Root, of Medina, and others, and in addition to the above, Prof. Lizenby, of the Ohio University, will deliver a lecture on "Honey-producing plants:" also Mrs. Jennie Culp will read an essay.

C. M. Kingsbury, *Sec.*

☞ The Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association, will hold its annual meeting in Temperance Hall, Freeport, Ill., on Jan. 15 and 16, 1884.

J. Stewart, *Sec.*
Rock City, Ill., Nov. 30, 1883.

☞ The 5th annual Convention of the Northeastern Ohio and Northwestern Pennsylvania Bee-Keepers' Association, will be held at Jefferson, Ohio, Jan. 16 and 17, 1884. All are cordially invited.

C. H. Coon, *Sec.*
New Lyme, O., Nov. 26, 1883.

☞ Owing to the death of our Secretary, Mr. T. Brookins, please announce in the Bee Journal that the annual meeting of the Champlain Valley Bee-Keepers' Association, will meet in the parlors of the Addison House, Middleburg, Vt., the second Thursday in January, 1884.

J. E. Crane, *Pres.*

☞ The Bee-Keepers' Association of Central Illinois, will meet in Bloomington, on Jan. 9, 1884. All are cordially invited to attend.

Jas. Poindexter, *Sec.*

☞ The annual meeting of the Cortland Union Bee-Keepers' Association will be held in Cortland, N. Y., on Tuesday, Jan. 8, 1884.

M. C. Bean, *Sec.*

☞ A meeting of the bee-keepers of Des Moines Co., Iowa, will be held on the second Tuesday in January, at 10 a. m., for the purpose of organizing a county bee-kepers' association, at Middleton, Iowa, in R. C. Crawford's Hall. John Nau, Frank Melcher, A. M. Baldwin, W. R. Glandon, *Committee.*

☞ The Southeastern Michigan Bee-Keepers' Convention will be held at Adrian, Mich., in the Plymouth Church Chapel, Jan. 23, 1884; morning, afternoon and evening session.

H. D. Cutting, *Pres.*
H. C. Markham, *Sec.*

☞ The Eastern New York Bee-Keepers Union, will hold an annual Convention in the Agricultural Hall at Albany, N. Y., on Tuesday, Wednesday and Thursday, Jan. 3, 8, 9 and 10, 1884. We invite exhibition of hives, extractors, implements for the apiary, and all apiarian supplies. Time will be given for exhibition and examination, and testimonials awarded. There will be speeches and essays on important topics from prominent apiarists, and questions on interesting subjects will be discussed. A general invitation is extended to all interested in apiculture. S. Vrooman, *Pres.*

Honey and Beeswax Market.

Office of American Bee Journal,
Monday, 10 a. m., Dec. 24, 1883.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

Extracted honey brings 7@9c. on arrival Best comb honey, 16@17c. in small sections.

BEESWAX—Is of ready sale at 28@30 on arrival.

Chas. F. Muth.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 17@22c. Dark and second quality, 14@15c.; extracted white clover in kegs and barrels, 9@½10c.; dark, 8@9c.

BEESWAX—Prime yellow, 27@29 c.

H.K. & F.B Thurber & Co.

CHICAGO.

HONEY—The market remains without change from that of last week. Dealers and retailers buy only enough to supply the demand for present use. It is impossible to place lots, or entire shipments, owing to the reluctance of dealers to buy in advence of immediate wants. Prices obtained for white comb in 1 lb. sections, 18@20c.; 1½ and 2 lb., 15@18c. according to beauty of same. Extracted honey, 8@10c. per lb., according to color, body and flavor.

BEESWAX—Yellow, 33c.; medium, 28@30c.

R. A. Burnett, 161 South Water St.

KANSAS CITY, MO.

HONEY—Market is active and receipts liberal for comb honey, prices ruling from 18c. for choice 2 lb. sections, and sales of a few small lots of choice 1 lb. sections at 19c. Extracted in fair demand at 8@10c., according to quality.

Jerome Twichell, 514 Walnut Street.

SAN FRANCISCO.

HONEY—There is some local demand for extra white comb and such could be placed at good figures, but there is an absence of inquiry for all other descriptions. Fair comb was offered at 10c. A sale of extracted of medium quality was made at 6c. White to extra white comb, 15@20c.; dark to good, 9@11c; extracted, choice to extra white, 7@7½c.; dark and candied, 6@—

BEESWAX—Wholesale, 27½@30c.

Stearns & Smith, 423 Front Street.

ST. LOUIS.

HONEY—Comb met a fair local demand at 15c. to 18c. per lb. for choice; strained and extracted dull at 6½@7c—in small cans and fancy pkgs. at 10c

BEESWAX—Firm, at 29@30c.

W. T. Anderson & Co., 104 N. 3d Street

CLEVELAND.

HONEY—Honey continues in excellent demand, as reported last; every lot of choice white comb is taken up as fast as it comes at 18c. in quantity for 1 lb. sections, and an occasional sale at 19; in a very few instances only, 20c. has been reached. Broken lots and second quality is very slow sale. For extracted there is no demand.

BEESWAX—Is eagerly inquired for at 28@30c., but none to supply the demand.

A. C. Kendel, 115 Ontario Street.

BOSTON.

HONEY—Our market is very quiet on honey. We quote 16@18c. for best 2 lb. sections—18@20c. for best white 1 lb., and 10c. for extracted.

BEESWAX—We have none to quote.

Blake & Ripley, 57 Chatham Street.

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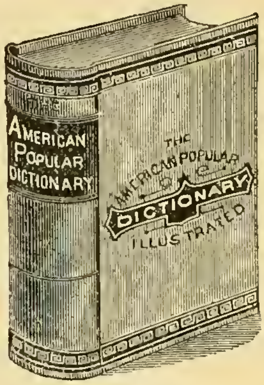
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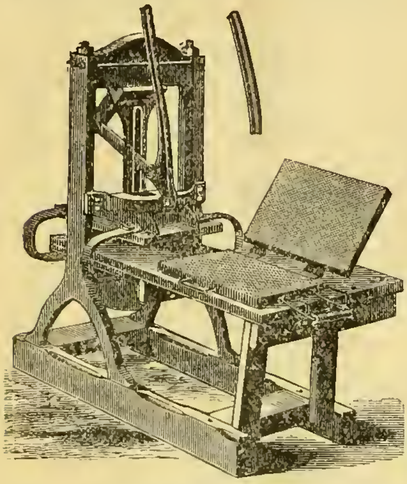

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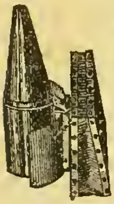

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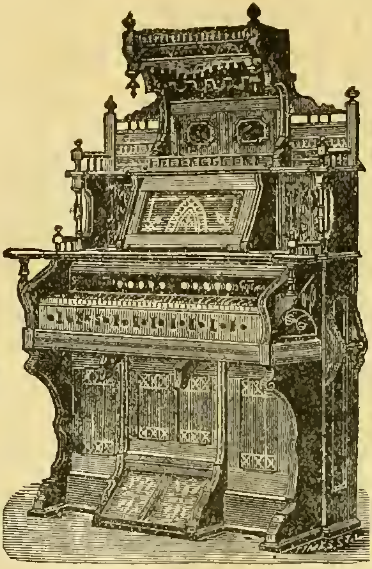

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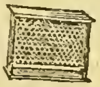

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